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Saier's GARDEN

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A MANUAL OF RARE FLOWERS, THEIR SELECTION AND CULTURE

Vol. 3, No 6.

January, 1954

25 Cents



The Hermitage — Home of Andrew Jackson

40 YEARS
of
EXPERIENCE

The Gardens at the Hermitage
The Capers of Commerce

HERB SEEDS OF ALL KINDS

ANGELICA (an-JEL-i-kah)

(*Angelica archangelica*) A stout herb to 6 ft. growing on low ground and makes a striking picture by side of stream, perennial. Pkt. 20¢; Oz. 60¢.

ANISE. (AN-is)

(*Pimpinella anisum*) Parsley Family, the leaves and seeds used for flavoring in cooking and also in medicine. Annual to 2 ft. and easily grown. Sow seed in April in rows where plants are to grow. Pkt. 20¢; Ounce 60¢.

BALM, LEMON.

(*Melissa officinalis*). An aromatic sweet herb of Mint Family, used in seasoning, in liquors and medicine; grows 2 ft. high. leaves have a decided lemon odor and flavor. Easily grown from seed sown late in fall or early in spring. Pkt. 20¢; Ounce \$1.00.



SWEET BASIL

BASIL, Bush or Dwarf.

BAZ-il) (*Ocimum basilicum minimum*) Sweet herb of Mint Family, esteemed for flavoring, is an annual, tender and should be planted after frost danger is past. Easily grown from seed, started indoors or planted directly to garden, thin plants to 6-12" apart and in rich soil plants will continue to develop leaves after being cut. Cut the leaves as blossoms form, hang up in bundles to dry; plants can be lifted in fall for green leaves during the winter. This type grows 2 ft high. Pkt. 15¢; Oz. 30¢.

BASIL, Tall Green.

A taller strain of Basil and much used in a commercial way by market gardeners. Pkt. 15¢; Oz. 30¢; 1/4 lb. \$1.30

BORAGE (BUR-ahj)

(*Borage officinalis*) An attractive plant 18" high, with pretty sky-blue flowers in clusters, liked by bees. Upper leaves and flowers used in salads; the lower leaves are cooked like Spinach; the fresh foliage has Cucumber flavor and adds a cooling touch to salads. Space plants 2-3 ft. apart. hardy annual. Pkt. 15¢; Oz. 50¢



BORAGE

CARAWAY (KAR-ah-way)

(*Carum carvi*) An annual or biennial whose seeds are used to season bread, cakes, confections and cheeses; easily grown from early spring grown seeds, where plants are to stand, for two seasons. The young shoots and leaves may be used to flavor salads. Sow a few radish seed to mark your row. Pkt. 15¢; Oz. 35¢

CARDOON (kahr-DOON) Smooth Spanish

(*Cynara cardunculus*). Grown for its blanched stalks and thick main root, sow seeds early where plants are to grow, in hills 18-24" apart. Water during dry periods to keep foliage tender, in fall treat like Celery and later they will be ready to eat like Endive or Celery. Pkt. 15¢; Ounce 90¢

CELERY, Soup

Plain leaf type best suited for use in flavoring soups, either in green state or dried. Pkt. 15¢; Oz. 35¢

CHERVIL. (CHUR-vil)

(*Anthriscus cerefolium*) Plain leaf Chervil of Parsley Family, whose Parsley like leaves are used for flavoring salads. Grows 18-24 inches. Sow seeds in early spring or late fall in any good garden soil, some shade best; produces leaves for use in 6-10 weeks. Pkt. 15¢; Oz. 40¢.

CHERVIL, Curled Leaf.

Similar to the plain leaf type except that the curled leaves are used more for garnishing, as with Parsley. Pkt. 15¢; Oz. 40¢.

CHICKORY. Brussels Witlof.

Special Strain (Chicorium intybus) A perennial herb, the roots of which can be dried and used as a substitute for coffee; the leaves are used when young and tender as greens or those of the older plants

are blanched much like Celery. The leaves are forced during the fall and winter to produce loose white or pink leaves or Witlof or French Endive. Sow early in the spring, thinly, in rows 18" apart, thin plants to 6" apart in the row. Dig the roots in the fall, cutting the tops to one inch and store in a pit or root cellar; for Witlof, shorten the roots to 8-9 inches, cutting the lower end, bury upright in damp sand or soil, covering tops with 6-8 inches of the soil and keep at about 60 degree F; in 2-3 weeks the blanched heads 5-6" long can be cut for use. Pkt. 15¢; Oz. 35¢; 1/4 lb. \$1.95

CHICORY, van Spronsen's Variety. A special select variety of Brussels Witlof. Pkt. 15¢; Oz. 35¢; 1/4 lb. \$1.95

CHIVES (CHY-vz)

(*Allium schoenoprasum*) Perennial developing a thick grass like tuft and valued for their mild onion-like flavor, the green stems being used in salads, soups, etc. The oftener the leaves are cut the stronger the plant will grow. Sow seeds early in the spring, in rows 2-3 feet apart and thin plants to 6 inches apart. Keep seeds in sealed jar in refrigerator if not planted when received. Pkt. 15¢; Oz. 90¢

CORN SALAD

(*Valerianella locusta*, var. *oiltoria*) Dutch Broad Leaf, Large Seeded. Also known as Fetticus, Vetticost and Lamb's Lettuce. Grown in the early spring or late fall as a pot-herb; seed sown in the early fall, some plants will get large enough for fall use and the balance with mulching can be carried over for early spring plants. Sow in early spring in rows 12 inches apart, they do not do well during the hot summer. The leaves are mixed with mustard, pepper grass or water cress, as a salad. Pkt. 15¢; Oz. 60¢

CRESS

(*Lepidium sativum*) Pepper Grass. —Plain Leaved. Annual growing quickly and making the best greens for garnishing and for salads; the richer the soil the better plant in rows 12" apart in earliest spring and at weekly intervals till middle of May. Pkt. 15¢; Oz. 25¢; 1/4 lb. 40¢

—Curled or Double Leaved. Makes nicer leaves for garnishing as well as for salads. Pkt. 15¢; Oz. 25¢; 1/4 lb. 45¢

—Large Leafed French. A large leaf strain. Pkt. 15¢; Oz. 25¢; 1/4 lb. 45¢

CRESS, American Upland or Winter Cress

(*Barbara vernaproxox*) A hardy biennial HERB LIST Continued on Page 289.



CHERVIL

HARRY E. SAIER - DIMONDALE, MICHIGAN.

The Hermitage - the Home of Jackson

The name "Hermitage" held a charm for Andrew Jackson for it suggested a haven of peace and a withdrawal from the busy scenes of his turbulent times. And, to Rachel Donelson Jackson, his wife, it was home, and where she spent the happiest years of her life.

The old iron gates, entered from Rachel's Lane, lead into a guitar-shaped driveway outlined with Cedar trees. This unique idea



The Home of Andrew Jackson

was thought of by President Jackson and the plan drawn by Ralph Earl, the artist, who resided at the Hermitage for many years. The guitar was played by Mrs Sarah Yorke Jackson, the adopted son's wife, who was Mistress of the Hermitage after Mrs. Jackson's death, in 1828. The driveway was a tribute to his daughter-in-law, who played so sweetly for him in the twilight on the white pillowed portico.

A view from the upstairs porch bears out the fact that Andrew Jackson had a great interest in trees and made of the front lawn a representative arboretum of Tennessee species. The two stately Hollies near the front porch have stood the test of time. Each December they seem to take on the old holiday spirit with their abundant clusters of red berries.

In 1837, The Hermitage Plantation consisted of 2,600 acres and was the most productive of its size in the Southwest. Today, only 500 of the original acres are left and this is under cultivation. Beef cattle are grazing on the Blue Grass once used for the General's famous thoroughbreds. Walnut trees can be found dotted here and there and it has been said, that, when walking over the fields, the General carried pockets full of walnuts and stuck them into the ground with his walking cane.

The flower garden is on the east side of the house, just outside Jackson's office or library. Here he could view it in all seasons from the side windows. The garden was ever a source of interest to Rachel and it was a great pleasure to The General to procure from distant places, rare plants and unusual

By Mrs. William H. Wemyss
Regent, Ladies Hermitage Association

flowers. These she enjoyed exchanging with her friends and neighbors. Quoting from a diary written in 1827 by Mrs. Juliana Courtney Connor of North Carolina when she visited The Hermitage on her wedding trip in early September of that year: "After I was rested she (Mrs. Jackson) proposed

she arranged very tastily".

The garden was laid out in 1819 by William Frost, an English landscape gardener. It is an acre square and is surrounded by a white picket fence made of Cedar. A wide gravel walk divides the square into four equal plats. In the center, the wide walks converge into a circle, which is divided by narrow walks into circular formal beds. Around the entire garden is a deep border of flowers and shrubs. In the center of the four plats is a carpet of Blue Grass. Bricks made by the slaves especially for edging the walks are bevelled at the top and they go deep in the ground to deter the moles.

The garden is maintained today in its quaint old-fashioned charm. The plants found there were the varieties grown under Mrs. Jackson's tender care. There are flowering box Crepe Myrtle, Snowball, Bridal Wreath, Callicanthus Peonies, Lilies, Pinks and old varieties of Roses, Jonquils and Flags and the rare old crown Honeysuckle. General Jackson's favorite flower was the Hyacinth and Mrs. Jackson's, the Violet. These two bloom in profusion in the early spring. The Fringe Smoke and old purple Japanese Magnolias are very beautiful.

President Jackson chose the corner of the garden nearest the rising sun for their tomb to be built. It is Greek Classic in design. Giant Magnolias stand sentinel over its copper dome. Nearby, as if standing at attention, are five large Hickory trees, having been planted there by Old Hickory, himself!

It was his custom late in the afternoon, to walk out alone to the tomb and pay silent tribute to his beloved wife. A feeling of reverence and respect is felt by all who read the beautiful and moving inscription on Mrs. Jackson's slab:

"Here lie the remains of Mrs. Rachel Jackson, wife of President Jackson, who died the 22nd of December, 1828. Age, 61 years. Her face was fair, her person pleasing, her temper amiable, her heart kind; she delighted in relieving the wants of her fellow creatures, and cultivated that divine pleasure by the

walking into the garden which is very large and quite her hobby. I never saw anyone more enthusiastically fond of flowers. She cut for me the only rose which was in bloom and made up a pretty nosegay". Mr. and Mrs. Connor spent the night and next morn



The Flower Gardens at the Hermitage

ing at The Hermitage and quoting further about her leave taking: "Mrs. Jackson would not permit me to go without a bouquet which

most liberal and unpretending methods; to the poor she was a benefactor; to the rich an

(Continued to Page 361)

Diagnosing Plant Troubles

Combsie's Iris Gardens of Whittier, California issues a little bulletin in which the following is copied.

Basically, the troubles which arise in gardening may be divided into four groups, about as follows:

- (1) Not enough light (too shady); not enough or too much water; temperatures.
- (2) Attacks by fungui, bacterial blights and animal pests.
- (3) Attacks by insects of all types.
- (4) Deficiencies in chemicals and minerals necessary for plant growth.

Most gardeners have had extensive advice in the control of the first three items, but the really tough one — Number 4 — is seldom made clear to the plain-dirt gardener. Let's see what troubles you may have.

NITROGEN DEFICIENCY:

Uniform yellowing of the leaves; also severe dwarfing of plant.

If plants seem to need nitrogen ONLY, use one ounce of ammonium sulphate to two gallons of water. Water a plant with this solution once a week until all has been used. Extra bonemeal applied around base of plant is also helpful.

PHOSPHORUS DEFICIENCY:

Margins of the leaves will turn yellow; leaves drop.

For phosphorus only, a cupful of bone-meal can be mixed into the soil, or a tablespoon of superphosphate in a quart of water may be poured on the soil close to the base of the plant.

POTASSIUM DEFICIENCY:

Leaves become mottled, the edges turn brown — often turns purple.

Potash is purchased in the form of potassium sulphate or as potassium chloride. A tablespoonful scattered on top of the soil and watered in well, will be most helpful.

IRON DEFICIENCY:

Leaves turn yellow between the veins while the leaf veins themselves remain green. In

MISSPELLED WORDS.

In spite of every effort, words turn up misspelled; Zinnias as an example, under a picture, in a recent issue. How this could have gotten by, cannot be explained. All of us know how it is spelled and during the printing, corrections are looked for — when you come across a simple word misspelled do not think we just are dumb!

However, there is a practice of hyphenating such words as rosy-white, pinkish-lavender, etc. I cannot understand why this is done, especially in some very important horticultural books. It could be a rose-red but never a rosy-red — rose-red. Another word we must get set on is the word 'mold' or should we say, mould? Also gray or grey?

PASSIFLORA SPECIES WANTED.

One of our Australian readers is especially interested in getting seed of the following kinds. We would like to hear from any reader growing one or more of them.

PASSIFLORA:

—pfordtii (syn. alata-caerulea); alata; phoenicea; antioquiensis (syn. van-volxemii); maliformis; militaris; racemosa; oviformis; brasiliiana; latifolia; mauritiana; mascarensis; vitifolia; maculifolia; manicata; mixta; cinnabarinia; quitenensis.

severe cases, entire leaf turns yellow.

Iron sulphate or iron citrate will help. A tablespoonful to a rose bush, but only a quarter-spoonful for a potted plant. Dissolve it in water and sprinkle on the ground. If a commercial product is used, be sure to follow THEIR directions.

MAGNESIUM DEFICIENCY:

Similar to iron shortage, except that the lower leaves of the plant are first to turn yellow. Often, dead spots appear between the veins.

Epsom Salts are your best bet here. Half a dozen crystals may be dissolved in water and sufficient for a rose bush.

CALCIUM DEFICIENCY:

Nearly all small feeding roots die within a two to four-week period.

This will be followed by the dying of the terminal bud. Calcium is supplied by calcium carbonate, calcium sulphate or dolomite. Dissolve a half-cupful in water for each shrub or rose bush.

SULPHUR DEFICIENCY:

The leaf veins are lighter in color than the rest of the leaf. This is exactly opposite from the symptoms caused by the lack of iron, magnesium and manganese.

Any sulphur dust used for control of mildew or red spider mites can be dusted on the surface of the soil and scratched in. We suggest this method because sulphur is difficult to wet down.

BORON DEFICIENCY:

Leaves at top of plant becomes thick and brittle and the terminal (top) bud dies.

Boron comes from borax or boracic acid. Just a speck on a knife blade is sufficient to add to a watering can of water.

Use this a few times when watering the plants.

NOTE: It is our intention to supply the above chemicals and they will be found listed in the "Garden Supply Advertising" page.

THE AFRICAN ST. JOHN'S WORT.

We have several species of Hypericum in the U. S. A., all rather tender in the North altho some can be grown here in Michigan in sheltered situations.

There are, also, several species found in Southern Rhodesia, where they are distributed according to the altitude. H. leucopterychoides is found at higher levels, while H. Roeperianum, grows in the valleys.

It would be interesting to hybridize these species with those grown here. Our best Hypericum, H. moserianum, is a hybrid; they all grow readily from seed.

INCREASING HARDINESS.

It is possible to increase the hardiness of a tree by grafting and thus adapt it to the adverse climate of the grower.

This is especially true in the fruit trees. It causes an earlier maturity of the cion or the stock may actually impede the flow of sap and thus cause earlier maturity.

It would be of interest to know of examples in ornamental trees; especially so, for many of the most beautiful flowering trees are not hardy in Michigan climate and grafting them on some other stock might make it possible to grow them in the North.

SUBSCRIPTION PRICE \$2.00 12 ISSUES

Grevillea Robusta

Silk Oak. An Australian ornamental tree that can be grown in the far South for both ornament or as a street tree; in the North it is a popular greenhouse subject and usually grown in 6 or 8 inch pots.

Its flowers are orange-yellow and curiously shaped; fast growing and easy from seed. Fresh seed arrives in July or August and the seed should be sown at once for best germination. The price is \$1.50 per ounce or \$20.00 per pound; packets 50¢ each.

For regular greenhouse growing seed is sown a half inch deep, during February or March and held at 65-70 degrees F.; seeds should be placed in the soil point downwards or side ways but not flat; repot in March or April; water freely in summer but moderately in winter.

The foliage is fern-like, evergreen and making it an attractive pot plant.

A light compost is best, 3 parts sandy loam and one part leaf mold, with a sprinkling of coarse sand. Good drainage; soil should be firm. Grow plant as a single stem and do not pinch; water carefully as dryness at base will cause loss of lower leaves. A winter temperature of 45-50 is best making it a good subject for a cool house.

THE BULB SOCIETY.

The Bulb Society is made up mostly of a California group of growers but I presume its membership is pretty well scattered over the country.

I wish to especially mention them this month because they seem so interested in spreading information about the flowers they are most interested in. There are some organizations that are just the opposite; who seem to feel that their particular flower is their private reserve, one even requiring a prospective member to be properly introduced and recommended before he can be voted to membership! We think this is a little uncalled for.

The Bulb Society issues a four page bulletin each month and devoted to bulb growing rather than being filled up with talk about unimportant matters.

If you are interested, write them at 26 E. Camino Real, Arcadia, Calif.

BEGONIA CUTTINGS.

If the leaf to be used for a cutting is taken near the flowering region, it will bloom more quickly than a cutting taken otherwise.

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The Species of Oxalis Occurring in the Cape Peninsula with Key

NOTE: The following remarks on *Oxalis* appeared in the Journal of the Botanical Society of South Africa and was written by Captain T. M. Salter.

Out of over 200 species of South African *Oxalis* (Suringi), 32 occur in the Cape Peninsula, excluding the garden weed, *O. latifolia*, with pinkish purple flowers, which is a native of Mexico.

After the key, there follows an alphabetical list of the species with notes as regards the comparative frequency of their occurrence, the usual flowering season and localities in which the more uncommon species may be found. Where changes in nomenclature have been necessary, reference is made to the invalid, though perhaps more familiar names.

Although the bulb is one of the most important characters in distinguishing and classifying the different species of *Oxalis*, our Peninsula forms can usually be determined without it. Should these plants be collected in other parts of South Africa, however, it is highly important to obtain bulbs, if they are to be identified. The areas richest in this genus are the Clanwilliam and Van Rhyn's Dorp Divisions and Namaqualand and there are undoubtedly many new species and varieties yet to be discovered. In the Cape Peninsula the most prolific area in variety of species is Lion's Head and Signal Hill, during May and June.

Plants with double flowers are sometimes found in the species *compressa*, *glabra*, *hirta*, *luteola*, *pes caprae*, *Pocockiae* and *obtusa*. It is possible that they occur in other local species.

KEY

1. Flower stalk with more than 1 fl. 2
Flower stalk with only 1 flower. 8
2. A creeping annual without a bulb; flower very small; yellow. *corniculata*. Not creeping; plants with a bulb 3.
3. Flowers yellow. 4
Flowers never yellow. 5
4. Stalk of the leaf flattened. *compressa*. Stalk of the leaf not flattened. *pes caprae*.
5. Flower stalk and calyx with gland-tipped hairs; plant usually with a stem. 6
Flower stalk and calyx not as above; plant usually stemless. 7.
6. Leaflets divided to about the middle. *dentata*.
Leaflets divided well below the middle. *stellata* var. *glandulosa*.
7. Leaflets widely bi-lobed with rounded lobes; flowers very pale mauve. *caprina*. Leaflets often 1" wide, with triangular lobes; flowers pinkish purple. *latifolia*.
8. Leaves simple, i. e. without separate leaflets. *monophylla*. Leaves with 3 or more leaflets. 9.
9. Leaves with more than 3 leaflets. 10.
Leaves with 3 leaflets. 12.
10. Flowers yellow; leaflets usually 5 to 9. *flava*.
Flowers white or pink. 11.
11. Leaflets 12 to 20; fls white. *tomentosa*. Leaflets 5; fls pink. *polyphylla* var. *pentaphylla*.
12. Stem developed above ground, often more or less leafy. 13.
Stemless. 27.

13. Leaflets narrow, oblong or wedged-shaped, always longer than broad 14.
Leaflets heart-shaped or divided to the middle or below. 23.
14. Hairs all gland-tipped; petals with a red margin beneath. *multicaulis*. Hairs not gland-tipped (or in *O. versicolor*, sometimes with gland-tipped hairs on the flower stalk and calyx). 15.
15. Stem bare or with very few leaves; flower stalk arising from top of the stem. 16.
Stems densely leafy, the lvs. almost stalkless; fl stalk mostly arising below the top of the stem. 21.
16. Flowers ½ in. or less in diam; stem very short; sepals with 2 calli at the tip; a very small species. *pusilla*. Flowers larger; stem usually at least an inch long. 17.
17. Leaflets and sepals with distinct red or orange swellings (calli) at tip. 18.
Leaflets and sepals without such calli or in *O. glabra* sometimes with minute calli. 20.
18. Petals with reddish margins beneath. 19.
Petals not as above. *polyphylla*.
19. Leaflets without hairs on the upper face. *vericolor*.
Leaflets hairy both above and beneath. *argyrophylla*.
20. Fls slightly hairy outside; petals pale rose. *falcata*.
Flowers without hairs; petals usually red; bulb small. *glabra*.
21. Lvs on the stems scattered; flowers usually red. *glabra*.
Leaves closely clustered on stem. 22.
22. Petals white with red margin beneath. *tenuifolia*.
Petals pale mauve or red, often with a buff-colored margin beneath. *hirta*.
23. Leaflets divided to the middle or below; flowers pink. *bifida*.
Leaflets widely heart-shaped. 24.
24. A water plant; fls small, white. *natans*.
Land plants. 25.
25. Leaves almost stalkless. *hirta*.
Lvs with well developed stalks. 26.
26. Stem branching; leaflets without hairs; fls very pale mauve or white. *incarnata*.
Stem not branching, usually short; leaflets hairy; fls white or rarely rose-red. *lanata*.
27. Leaflets broadly heart-shaped. 28.
Leaflets roundish or in *O. minuta*, oval or oblong-wedge-shaped. 29.
28. Hairs on the flower and leaf-stalks reversed; fls brick red or rarely yellow. *obtusa*.
Hairs not reversed; fls white. *lanata*.
29. Anthers shaped like arrow-heads. 30.
Anthers more or less egg-shaped. 33.
30. Leaflets roundish, usually as broad or broader than long. 31.
Leaflets oval or oblong-wedge-shaped. *minuta*.
31. Hairs on the margins of the leaflets set closely, the leaflets often purple beneath. (Flowers from April) *Eckloniana* v. *Sonderi*.
Hairs on the margins of the leaflets distinct on minute teeth, the leaflets green beneath; fls from June. 32.
32. Flowers white. *nudulans*.

Fls rosy purple. *nudulans* v. *denticulata*
Fls yellow. *luteola*.
Flowers not yellow. 34.

34. Tube of fl slightly swollen, not funnel-shaped; leaflets with very inconspicuous transparent streaks which turn black after drying; fls reddish purple, pink or white, rarely salmon. *purpurea*.
Tube of fl and leaflets not as above. 35.

35. Plant covered with small gland-tipped hairs; fls white to pink, very small. *punctata*.
Plant without gland-tipped hairs. 36.

36. Extreme base of the leaf-stalk winged; flowers mauve. 37.
Base of the leaf stalk without wings; fls with a widely funnel-shape tube. 38.

37. Leaflets pale green above and beneath; bulb without wings. *depressa*.
Leaflets dark green above, purple beneath; bulb with 4 vertical wings. *Pocockiae*.

38. Flowers pale rosy lilac the tube yellow. *commutata*.
Flowers, including the tube, rosy purple; flower smaller. *commutata* v. *concolor*.

Alphabetical List with some Notes on Species

argyrophylla Salter. Frequent in the northern parts; May-July. Formerly known as *O. falcata* Sond. var. *callosa*.

bifida Thunb. Common on partly shaded slopes; March-July, but sometimes Sept-Oct., when the plants become bushy.

caprina L. Common, usually near cultivation or as a weed. Only the form with short styles occurs in the Peninsula.

commutata Sond. Frequent on flats and slopes; March-June. Variety *concolor* Salter generally grows at high altitudes except south of Smitswinkel.

compressa L.f. Frequent in the northern parts; June-Sept.

corniculata L. A common cosmopolitan weed; flowers throughout the year.

dentata Jacq. Common on slopes; March-May; often confused with *O. livida* Jacq. It is the only species in which the slug-like contractile root acts horizontally, dragging the newly formed bulb sidewise to a new position.

depressa E. and Z. Local on sand dunes south of Retreat; May; formerly confused with *O. convexula* Jacq.

Eckloniana Presl var. *Sonderi* Salter. Common Apr.-Aug. Formerly erroneously known as *O. purpurea* Thunb., not of Linn. The typical form of *O. Eckloniana*, with sulphur yellow flowers which used to occur on Green Point Common, seems to have been exterminated.

falcata Salter. Local on Lion's Mt; May-July. Formerly known by the invalid name *O. falcata* Sond.

flava L. Local on Lion's Mt. May-June.

glabra Thunb. Common on flats and low slopes; May to August.

hirta L. Common and very variable; April-Aug. A white form, without hairs, occurs near Retreat and a greyish hairy variety *canescens* (Jacq) Salter, with deep rose short-tubed flowers grows on the Saddle on Lion's Mt.

incarnata L. Common in the woods at Kirstenbosch; August-December, and occasionally in March and April

lanata L. f. Common on slopes; May-Oct. The variety *rosea* Salter, with rose-red flowers, is very local at and near Kirstenbosch; August-September.

latifolia H. B. and K. A garden weed, introduced from Mexico; Feb.-April.

(Cont. on Page 356.)

The Magic of the Pollen

By Arthur G. Eldredge

When the warm breath of spring revives the landscape, putting tassels on the black alder and brings forth from the mud the golden treasure of the marsh marigold, then, there will be found floating in the very air we breathe that magical stuff, pollen.

It is a long way back, down the corridors of time before the pine trees came into being, that a new process of reproduction was being evolved in the midst of all the spore-bearers. The new process was founded on what we term pollen for want of a better name. Being interpreted it only means dust or powder, which is most often yellow. These golden grains carry the spark of life necessary for the reproduction of most of the plants about us. In the early forms of the pollen bearers it's distribution through the forest was dependent on the wind.

With the development of flowering herbaceous plants and some of the trees, such as magnolia, there came into existence a type of insect, the Hymenoptera, of which bees and hornets are a member. They were destined to be the unpaid workmen who, craving the proteins and oils of its contents should unconsciously carry it from flower to flower in the countless billions of blossoms that decorate the field and forest. To these persistent workers we owe thanks and reverence for the performance of this gigantic task that makes possible the fruits and fabric of beauty that clothes the meadow and the hillside. But for their efforts most of the flowers surely would disappear and but for the flowers these artisans could not exist, for it is the nectar and the pollen that supports their spark of life.

The pollination of flowers is infinitely more complex than appears in the above

statement. There are many flowers whose pollen is sterile to its own stigma and therefore it must have pollen from another plant of the same species; lilies are a good example of this. There are numerous flowers that habitually self pollinate because of weather conditions which prevent their opening and prevents insects from coming. Plants of the boreal zone are in this class, for example some gentians. There are a host of flowers that have extraordinary provisions to promote the reception of insect borne pollen from a distant flower but if, perchance, the insect does not arrive, the flower will, at the last day pollinate itself, hollyhocks for example.

The orchids are mechanically unique in their devices to insure cross pollination and in most cases by a very specific insect because the arrangement of the parts is adjusted to that particular insect's head. If the insect does not come there will be no seed. An all-wise Creator has worked both ways in this problem for is it not the insect whose physical structure and abilities and whose desires for certain colors and flavors of nectar has helped to bring about the variations of this particular blossom and its adjustments to their performance? The Hymenoptera have been for eighty million years working at the job and it is not strange that something has been accomplished.

Cross-pollination is essential to preserve vigor, virility, quality and size, in fruit and seed. Hybridization is constantly occurring but the development and fixation of a new species occurs but slowly in the natural way. This is but a fragment of the story that goes on so unobtrusively about us to create so much that is beautiful and useful and which we take so much for granted.

Jacq., but it was first named *purpurea* by Linnaeus.

pusilla Jacq. Frequent on flats; May-June. A very small species.

stellata E. and Z., variety *glandulosa* Salter. Local and rare below cliffs above Partridge Point; April-May. Partial to shade.

tennifolia Jacq. Occasional on flats and slopes; Devil's Peak, Wynberg Hill and Kenilworth Race Course; June-August.

tomentosa L. f. Local, but abundant on Lion's Mt; April-June.

versicolor L. Common; May-Sept. The form on the hill slopes is softly hairy; that on the flats usually has gland-tipped hairs on the calyx.

NOTE: One must keep in mind that the flowering dates are stated for the Southern Hemisphere and 'north and south' mean the opposite.

Tropical Rarities

**MIAMI SUPREME GARDINIA
PEDILANTHUS, BRYOPHYLLUM
DRACAENA, WHITE HAWAIIAN
GINGER LILY, VARIEGATED
CROTON, IXORA, BILBERGIA,
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HIBISCUS, 10 cuttings TRIPLE
FIREBALL POINSETTIA,
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Corsage Kit or Dried Tropical Ar-
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5 Tropical Plants, \$4.50 prepaid**

JUDY'S JUNGLE
6318 NE Miami Pl., Miami, 38, Fla.

DROUGHT PERIODS

Here in Michigan it has been known that the high and low water levels of the Great Lakes act on eleven-year periods; every eleven years it reaches its highest level and in another five and a half years it is at its lowest.

These highs and lows, of course, indicate the amount of rainfall in the Great Lakes drainage area. Of late years, the interference with the water at Chicago by their drainage canal into the Mississippi river and again at Niagara Falls by the power plants, has changed the heights, especially at high levels but of late complaints have been made that low water, in the low-water periods, makes many docks useless.

During the early 30's, we had a very dry period (1932), again in 1943. This year it was not a 'rainy' year and one may also look for the same next year. But, according to past experiences, it is very probable that a wet period will again appear around 1958.

The lowering of water levels at Chicago might have some additional effect on crop growing conditions, especially in Michigan. Certainly, with the lakes almost encircling Michigan, its water level must be the same as the lakes and as they raise and fall, so must, also, the water level inland.

We have always been rather large growers of garden bean seed, and this crop especially reacts on rainfall, both in growing and, especially in the harvesting, so this cycle has always been very noticeable to us.

I wonder if this eleven-year rainfall cycle is common the world over?

ORCHIDS FOR THE SMALL GARDEN.

In the special amateur orchid issue of the Missouri Botanical Garden, the following species are mentioned as being grown successfully by the various writers.

Cattleya gigas, *C. Luddemani* or *C. speciosissima* and their hybrids, *C. Trianae*, *C. Mossiae* and their hybrids.

Dendrobiums and *Phalaenopsis*, *Cypripediums* and *Cymbidiums* seem to be popular. *Dendrobium nobile* and *D. Phalaenopsis* are especially mentioned. Another orchid grower seems to be especially interested in *Cymbidiums* but also grows *Cattleyas*, *Phalaenopsis*, *Oncidium*, *Cebolleta*, *Dendrobiums*, *Odontoglossum*, *Vandas*, *Coelogyne pandurata*, *Laelia Gouldiana*, several species and hybrids of *Miltonia*, are also grown by this grower. She also mentions *Columnea glaucosa* and *Fittonia Verschaffeltii*.

Another grower has *Epidendrum* tamente one of the easiest orchids for the amateur but other kinds are mentioned.

A "beginner" grows *Cattleyas*, *Cymbidiums*, *Dendrobiums*, *Odontoglossums* and *Oncidiums*, about 125 plants altogether.

It would be of interest to hear from our readers who have small greenhouses, either growing orchids or other kinds of flowers. Your experiences are most valuable to other growers, even your mistakes are worth recording.

OTHONNA CRASSIFOLIA.

I note on Page 103 that a reader wants seed of "little pickles". This is a common succulent, *Othonna crassifolia* or more properly, *O. capensis*. As all other *Othonnas* are self sterile and as undoubtedly all plants of this species in this country are descended from one original import, it's very unlikely that any seed is available in any nursery handling succulents. I do not see why seed is necessary.

Myron Kimnach, Richmond, California.



GREENHOUSE

Suggestions

GROWING PALMS FROM SEED.

Seed may be sown any time during the year, early spring being preferred. The seed should be covered about their own depth in soil. A good loamy soil, 2 parts, and 1 of sharp sand, for the strong growing kinds and for the small and slender species add a small portion of peat.

The seed pans or trays should be kept moist and over a good bottom heat. Moss is best in the bottom of the pans; use no broken crocks. Pot up in the smallest sized pots as soon as one leaf has formed and place in a good warm house.

The seed germinates in 2-3 months and usually are ready to pot up in 6-8 months.

The supply of seed of nearly all the Palms is very uncertain and therefore orders should be placed well in advance.

MALABAR MELONS.

Mrs. Davlin of Mass. writes:

Last spring I planted Malabar Melons that you were able to get for me. My harvest is 2 smallish melons but beautiful. There were many blossoms but they shriveled up and dropped off the vine.

Could you tell me why? Could you also tell me if the seed will be all right to plant next spring?

REPLY: I would be inclined to think that your plants lacked sufficient water during the summer months. It is a tropical vine from French Africa and no doubt requires a similar treatment as is told in the article in this issue on the New Guinea Bean.

Another point may be a cold spell when it was in flower which would tend to blast the flowers. The seed you grew, if well formed, should grow and I suggest that you try them in a protected sunny position, give plenty of water when growing and try hand pollinating a few flowers; of course, the soil should be reasonably rich.

THE NEW GUINEA BUTTER BEAN.

One of our readers from Pennsylvania, asked about the New Guinea Butter Bean and Mr. Wheeler of New Zealand kindly sends us seed and description.

It is called the Guada Bean there and is a popular vegetable of tropical climates. While it is described as a bean, it really is a vigorous climbing Gourd, producing a long fruit similar in quality to the Vegetable Marrow but often attains a length of about 4 feet.

Pick it when about 12-16 inches long and cook the same as one would the Marrows.

It grows best in a well drained, friable soil in a sunny place, giving it a strong support 6 feet high. Here in the North, probably it should be started indoors in pots but in the South it can be planted up to mid-summer. It stands no frost and is very tender.

Plant 2-3 seeds to the hill and thin to one when they get started. Space hills 6-8 feet apart. Plenty of water when growing is beneficial. (We will have seed of this to offer this spring; packets are 25¢ each).

When setting out plants it is very important that the proper spacing is necessary for their beauty at maturity.

SUBSCRIPTION PRICE \$2.00 12 ISSUES

ALBIZZIA LEBBEK

Oh! the joy of the magical Southland
With its tropical Jinnglebell trees
That waft their sweet mellow music
With each gentle evening breeze.

To lull you to sweet restful dreams
Of some quiet and lazy lagoon
Festooned with mimosas and orchids
'Neath a silvery Florida moon.

Oh! the glory of tropical waters
Phosphorescent with soft glowing light
Rippling with staccato cadence
Ali through the Florida night.

Myriads of dancing reflections
Palms silhouetted above
Glorious Florida moonlight
The tropical life that we love.

W. A. Pool, Florida.

WHO CAN HELP HERE?

Mrs. Given from Alaska writes, "I am ordering more of the Japanese Morning Glories of which I am very fond. However, we have one trouble — some little black bug arrives from nowhere and eats off the outer epidermis of the leaves so that they look like albinos. Must work at night as we very rarely see them. We have used various sprays but they do not seem to deter them.

The Morning Glory plants are now near our African Violets, which are completely unaffected by any bugs. Plants are sometimes in the house, othertimes in the greenhouse, but same trouble prevails.

SEEDS WANTED.

One of Australian customers wants seed of the following. Any of our readers able to supply them, please advise.

Kalmia latifolia.
Befaria racemosa. (Tar Flower)

Vaccinium arboreum.
Pieris floribunda.

Zenobia pulverulenta.

Also the following species of Rhododendrons:

R. alabamense, arborescens, atlanticum, austrinum, Bakeri, calendulaceum, canadense, canescens, cumberlandense, fastigiolatum, furbishii, nudiflorum, oblongifolium, occidentale, prunifolium, roseum, serrulatum, speciosum, vaseyi and viscosum.

ALASKIAN COTTON.

The Alaskan Cotton in the species *angustifolium*, the heads are raggedy and hang downwards; Scheuchzeri is equivalent to *camissonis*, the bronze species, except the large, single heads are pure white.

Other species of Cotton listed in The Alaska Wild Flower, are *alpinum* — tiny many stems springing from one crown; *gracile* — similar to *angustifolium* but smaller and found only in the interior; *opacum* — heads silky and close, not fluffy, very tall and found in the swamps of the interior; *polystachion* — tall, heavy stem with several heads; *vaginatum* — immense 'niggerheads' 2 feet or more above wet ground, all from the interior.

Alice M. Given, Alaska.

MAXLITE.

We would like to hear from any reader who is using this material as a substitute for glass on their greenhouses.

Other plastic screen as "Vim-Lite" and "Screen-Glass" would also be of interest.

Your experiences would be of interest to other readers.

Fertilizing indoor plants during the winter months can often do harm; it is best to wait till growth starts in the spring.

DO YOU OWN A GREENHOUSE?

If you are one of those fortunate gardeners who own a small greenhouse, want you write us some of your experiences and suggestions?

The following are suggested topics. The size and type of your house and what changes you would make if rebuilding. How have you solved the heating problem. What type of flowers do you find best to grow?

Have you any pictures, especially on attractive arrangements for the bench plantings?

What is your idea for an ideal amateur greenhouse, especially where the owner is occupied at other work during the day?

For the best article that we print on this subject, we will give a copy of, "The Amateur's Greenhouse", by Macself and for the second best, a copy of "A. B. C. of the Greenhouse" by Sherwell-Cooper, and third best, a copy of, "Simple Greenhouse Management" by Dakers.

Pictures will add to the value of the article.

VEGETABLE SEEDS

The following seeds will be of special interest to those growing flat plants in the greenhouse. Prices are based on purchases not less than a total quantity per order of one pound accepted at these prices; 4 oz. of a variety at the pound rate.

CABBAGE:	per lb.
Early Jersey Wakefield	\$1.70
Stein's Early Flat Dutch	1.70
Late Flat Dutch	1.70
Danish Ballhead	1.80

OTHER VEGETABLE SEEDS:

Mustard: Southern Giant Curled...	85
KALE: Siberian Improved...	.90

TURNIP: Purple Top White Globe...	.50
SPINACH: Bloomsdale	.45

Hollandia	.50
King of Denmark	.50

New Zealand	.50
Virginia Bright Resistant	.50

TOMATO: Greater Baltimore	2.50
Marglobe	2.50

Rutgers	2.50
New Stone	2.50

Bonny Best	2.75
PEPPER: California Wonder	4.00

Ruby King	4.00
BEET: Early Blood Turnip	1.00

CUCUMBER: Chicago Pickling	1.00
Long Green	1.50

ALL PRICES POSTPAID and SUBJECT TO BEING UNSOLD ON RECEIPT OF YOUR ORDER

ORDER NOW

HARRY E. SAIER Dimondale Michigan

DEC. CUTTING IN THE GREENHOUSE.

The following cuttings should be made during the month of December if their growth are to be timed right.

Acacia: Half ripened wood; 60-70 degrees F.

Acalypha: 60-70 degrees.

Agavea: 55 degrees Far.

Akebia: Hard wood; 45-50 degrees.

Allamanda: Ripe or soft wood; 50-60 with a little bottom heat.

Begonia: Leaf cuttings 65-70; Lorraine Type.

Coleus: 60-65 degrees.

Erica: Use short cuttings from strong plants; cover with bell-jar; not over 60 degrees.

Genetaria: Soft wood; keep closed; bottom heat; 65-70 degrees.

Jasminum: Ripe wood; 50-65.

Labelia: Take cuttings all winter from selected potted plants.

Moonvine: Keep cool.

Pelargonium: Geraniums; 55-60.

Saier's
GARDEN MAGAZINE
DIMONDALE, MICHIGAN.

VOL. 3, NO. 6. (11) JANUARY, 1954.

The seed list or catalog is being printed and will be mailed out as promptly as possible. It is being revised and will list some 7,000 different seeds. We are sorry that the last printing was not large enough to last till the fall months but there was a much greater demand than we had planned on and as it is necessary for us to do this printing and to revise the seeds, it has been impossible to get it out sooner. Our help situation is always short; wages in nearby factories runs to \$2.00 per hour. The cheapest sort of help costs better than \$1.00 per hour and this is usually the most costly! We mention this, not to be complaining, but as an explanation to delays and lack of service in some cases.

Is this condition ever going to change? We keep working from one year to the next, always expecting a change to the better will materialize but it always gets worse!

THE NATIONAL WEALTH:

The 1940 census placed the total worth of the nation at 140 billion dollars; I have seen many other estimates but they all are around this figure. Notre Dame University has come up with a 400 billion price but evidently they are using present dollars which would easily make 150 billion 'look' like 400 billion.

DO YOU HAVE A SAMPLE COPY?

We are mailing out nearly a thousand sample copies this month; most of them are to those requesting the Seed Catalog and requests by readers for samples to be sent to various addresses. We are pleased to do this but if you should wish each issue, it is necessary that you subscribe; the cost is very low — \$2.00 for 12 issues.

NOTE: If the figure 11 appears on your address, your subscription expires with this issue. It will be appreciated if you will renew promptly.

WHY A ROCKY SOIL

Where a rocky soil is indicated for some plant, it is usually due to the rocks absorbing moisture and then releasing it gradually for the plant roots.

One can mix in milled sphagnum moss with the soil which gives a similar effect.

The treatment is especially indicated in the growing of alpine plants.

OKRA.

It is of interest that this popular southern vegetable is an improved form of *Hibiscus esculentus*, a common native of Africa, where it grows wild in the Sudan and northern Uganda, and called 'baudakai', by the natives.

Another species of Hibiscus, viz., *H. sabdariffa*, is grown for making 'Rosella jelly'. It would be of interest if some of our readers in Africa could send a few seeds, with instructions on its growth and the making of the jelly.

The Hibiscus is closely related to cotton and the pests of the latter also attack Hibiscus such as the cotton stainer, which sucks the juices from young cotton seed and infects the bolls with disease. It is said that in Rhodesia, it is necessary to destroy Hibiscus if cotton is to be profitably grown. This might be a good suggestion to our cotton growers.

LENDING LIBRARY

OUR LENDING LIBRARY: It is with a desire to help those wishing to read up on various subjects pertaining to gardening and who find it inconvenient to purchase all the books being written. We have one doubt, however, as to the practicability of this service — a 25¢ charge for the loan of a book for two weeks will not amount to much IF letter or even a post card must be written about the loan; therefore, if the service is to be continued, we hope that those using the service will be prompt in either returning the book on time or to advise, as per the rules following.

We will be pleased to have remarks on the subject matter of any of these books, but it should be written on a separate sheet of paper and mailed in; we will then type the material and include it in the book along with the writer's name, IF it is of value.

Many more books will be listed in future issues as we can get time to prepare the information. If you wish to purchase any book borrowed, a purchase price will be

inserted and a new copy furnished.

HOW TO BORROW BOOKS: Send the amount of money as listed for each book, which pays for two weeks loan; **YOU ARE ALSO TO PAY THE POSTAGE BOTH WAYS;** the amount of postage can be figured from the stamps on your book when received and this amount should be put under the cover page, in postage stamps. You can hold a book one week longer than the two week period, without writing us, BUT there will be a charge of 2¢ per day which amount should be placed inside the cover with the postage money. If you intend holding a book longer, be sure to drop us a postal card, advising when you will make the return. This is necessary for two reasons, viz., other requests may be received for the book and, also, when the book should be in and it has not been received, it will be necessary for us to write about it; we **CANNOT** undertake to go to this bother for we are already pressed for time.

THE GARDEN BOOK of CALIFORNIA. 30¢—2 weeks.

Angier. 1906. 128 pgs. This book was written especially for California growing conditions; it covers a wide list of plants and is full of cultural information.

ROCKERIES.

Thomas; 137 pg. If you have a rock garden or intend to build one, there is a great deal of information on both the building of the rockery and the selection and culture of the most satisfactory flowers.

THE IRIS. 30¢—2 weeks.

Wister; 119 pgs; 1927; N. Y. A general treatment of the Iris.

THE BOOK OF THE IRIS. 35¢—2 weeks.

Lynch; 1903; London; 210 pgs. Although this was written many years ago, it contains much information on Iris species, as well as culture information.

THE DIANTHUS. 30¢—2 weeks.

Ingwersen; 125 pgs; 1949. It covers the genus rather fully and will be interesting to those wishing facts on Dianthus.

THE A. B. C. of the GREENHOUSE. 30¢—2 weeks.

Sherwell-Cooper; 320 pgs; 1950; London. Altho it deals with the subject from the English view point, it contains a wealth of information on the culture of plants suitable for the greenhouse.

COMMERCIAL PLANT PROPAGATION. 30¢—2 weeks.

Hottes; 1918; 181 pgs; N. Y. This volume contains a wealth of practical propagation information. Both as to methods and special information as to kinds of plants.

COMMON VELD FLOWERS. 25¢—2 weeks.

124 pgs; 1946; S. Rhodesia. This is a sort of elementary book on the common wild flowers found growing in South Rhodesia. It describes botanically 86 main species, with further remarks on many similar species. Of value to those interested in Rhodesian flowers.

OLD TIME HERBS for NORTHERN GARDENS. 30¢—2 weeks.

Kamm; 270 pgs; 1938. A full coverage of

QUICK GERMINATING ALPINES.

Alpine plants that germinate quickly are the Cistaceae, the Compositae, the Crucifers and the Leguminosae.

Next come the Crassulaceae, the Saxifragae, Campanulas, Potentillas, etc.

The longest to germinate are the Gentians, the Primulaceae, some Ranunculas, Peonies, some Anemones, Aconite, Umbellifers, Fraxinallas, some Berberidaceae some of the Liliaceae and the Irises.

all the popular herbs; descriptions, uses, cultural information, etc.

SECRETS of SUCCESSFUL PROPAGATION. 30¢—2 weeks.

Longmire; 142 pgs. Practical points on propagating many difficult plants. This is a very interesting and helpful book and contains many drawings.

THE BOOK of CLIMBING PLANTS.

Arnott; 1903; 124 pgs. General discussion of many kinds of ornamental climbers, and suitable for indoor growing. 25¢—2 weeks.

PRACTICAL HERB GROWING. 25¢—2 wks.

An English book of practical Herb growing; treated from the practical point of view.

THE CULTIVATION of SUCCULENTS.

Jacobsen; 1948; 106 pgs. Mainly cultural information on succulents. 30¢—2 weeks.

GARDEN HERBS. 25¢—2 weeks.

Whitehead; 82 pgs; 1944; London. Not one of the 'Ye Olde Herbe' books; tho a small volume it is full of practical cultural information on a long list of Herbs.

ANNUALS and BIENNIALS. 30¢—2 weeks.

Jekyll; 1916; 168 pgs; London. Many nice pictures; discusses use and cultural needs. Contains much information of value.

THE WILD GARDEN. 35¢—2 weeks.

Robinson; 238 pgs; 1870. An interesting book written in England. It covers, especially, those flowers that can be naturalized. Many of these old books are beautifully written and the writers seem to have a practical point of view that comes from actually working with their subject.

HOW to KNOW the WILD FLOWERS.

Dana; 365 pgs; 1895; N. Y. Half of this book consists of full page drawings of the flowers found east of Chicago. The descriptions are complete and designed so you can identify the flowers. 25¢—2 weeks.

THE AMATEUR'S GREENHOUSE.

Macself; 293 pgs; 1952; London. An English book and contains a great deal of valuable cultural information on all sorts of plants suitable for greenhouse growing as well as greenhouse management.

GRAFTING.

Plants of one family usually can be grafted upon each other. Hottes states in Commercial Plant Propagation, that it is possible to have Mountain Ash, the European Quince, the Japanese Quince, the June Berry, the Crab Apple, the Pear, the Medlar and the Cotoneaster all in bloom on a Thorn-Apple, or *Crataegus*, tree; all belong to the Rose Family.

SUBSCRIPTION PRICE \$2.00 12 ISSUES



RECOMMENDED GARDEN BOOKS

Send All Orders for Books to:
HARRY E. SAIER
Dimondale, Michigan.

PLEASE NOTE: We list several new books below that have been recently published in England and delivery may be a little delayed, especially if ordered for Christmas presents; however in this case we will advise the party to whom the book is to be sent.

CHRYSANTHEMUMS. \$2.50

For amateur and Market Grower. A complete guide for all Chrysanthemum growers. Demy 8vo. With 61 illus., 4 in color and several diagrams.

CHRYSANTHEMUMS FOR ALL. \$1.00

How to grow Chrysanthemums for exhibition and decoration; it is mainly for the beginner and the reasons for the various operations are carefully explained. Allerton. Crown 8vo. with 5 illus. from photo; 1 in color and 13 diagrams; London; 1953.

TWENTY YEARS OF SEED RESEARCH.

At Boyce Thompson Institute of Plant Research. Lela V. Barton and William Crocker; Demy 8vo; 21 illus. from photo; 10 diagrams; frontpiece in color. \$3.00

FRITILLARIES. \$4.25

Miss Beck treats the whole genus giving descriptions and details of cultivation. Christabel Beck. Royal 8vo. with 45 illus. from photographs, 4 of them in color; London, 1953.

THE IRIS. \$3.00

This comprehensive study covers planting, cultivation and aftercare, diseases, selection of varieties and an authoritative table of all known species. Leslie Cave; Demy 8vo. with 4 colored plates and 35 photographic illustrations.

THE PROPAGATION OF ALPINES. \$3.75

An exhaustive book for the student, amateur, nurseryman and expert, admirably indexed. Lawrence D. Hills. Demy 8vo, with 87 line drawings and 44 illustrations from photographs, one of them in color.

THE DAFFODIL. \$3.75

Its History, Varieties and Cultivation. The cultivation of all the important species and many hybrids with details of commercial productions, exhibiting and decoration. M. J. Jefferson-Brown. Demy 8vo. with 37 illustrations from photographs, 4 of them in color, 20 diagrams. London. 1953.

GARDENING WITH COMPOST. \$1.00

With an introduction by Sir Albert Howard. A convincing statement of the fundamental principals underlying the production of healthy crops. Crown 8vo. With 2 diagrams.

DAHLIA CULTIVATION. \$1.80

An attractive book which will captivate and encourage all Dahlia-lovers and fill up a long-felt want. Demy 8vo. With 41 illustrations from photographs, 4 of them in color, and 2 diagrams.

DAHLIAS FOR ALL. \$1.00

Practical advice for the beginner on how to grow Dahlias by the organic surface method, with first steps to exhibiting. Crown 8vo. With 5 illustrations from photographs, 1 of them in color.

FLOWERING & ORNAMENTAL SHRUBS

Their cultivation and propagation. Advice on what to grow under different conditions and instructions on preparation of the soil, pruning, propagation, pests and diseases. Demy 8vo. With 5 illustrations from photographs, one of them in color; D. Macer Wright; London; 1953. \$2.50

HERBAL DELIGHTS.

Tisanes, syrups, confections, robs, vinegars and conserves. Mrs. C. F. Lely; London; 1953. Demy 8vo. With 50 line drawings by Marion Rivers-Moore.

ROYAL HORTICULTURAL SOCIETY'S YEAR BOOKS.

We can supply copies of the **RHODODENDRON YEAR-BOOK**; the **DAFFODIL** and **TULIP YEAR-BOOK** and the **LILY YEAR-BOOK**. (1951-52) Each \$2.40

It will take about six weeks for delivery.

THE GARDEN FRAME.

184 pp. 8 pp plates, 38 figs in text, London (1947).

How to start plants in the frame, wintering over, and all those problems connected with protecting plants and getting them started while the weather is still chilly.

THE CACTUS GROWERS GUIDE.

The knowledge and advice which Mrs. Higgins gives in this volume, is backed by 20 years experience in Cactus growing. Besides complete cultural notes, Mrs. Higgins gives a clear account of the relationship between various kinds of Cacti and Succulents and explains in simple language how these plants are classified.

A.B.C. of ROCK GARDEN and POOL

\$1.50
Shewell-Cooper. 204 pp. illus. London 1949. Quite comprehensive for its size, this book lists many plants usable for rock gardens and for pools. Gives cultural hints and tells you how to construct rock gardens and pools.

PROPAGATION of HARDY TREES and SHRUBS.

\$1.75
G. M. Taylor. 107 pp. 8 pp plates, Oxford, 1947.

A book designed to meet the needs of the amateur. Tells how to make cuttings, layers, grafting, etc. What shrubs and trees can be propagated from seed and how best to treat the seed in order to obtain the best results

AUSTRALIAN WILD FLOWERS

75¢
National Handbook 9; 32 pp. 23 illus. (16 in full color). Melbourne, 1944. Gives notes on garden cultivation and identification lists of 106 wild flowers.

LILIES IN THEIR HOMES.

\$3.50
By Alice C. Maxwell. Mrs. Maxwell first takes in turn the various areas of the world where lilies are to be found, treating in detail the native lilies of each region. The second part of her book deals with the practical aspect of lily growing, methods of propagation, hybridizing and diseases. A list is given describing over 150 lilies, species and varieties now in cultivation and the main strains of hybrids. Pages of photographs, also line drawings.

DAFFODILS FOR AMATEURS.

\$1.50
By M. J. Jefferson-Brown. Cr. 8vo, 4 pp. plates, 96 pgs. This book is especially written for amateurs in Daffodil growing and describes the cultivation with advice on all those varieties which should give good results in the majority of gardens and which present no cultural difficulties.

THE PROPAGATION OF PLANTS

\$3.50
By E. J. King. 8vo., illus. How to propagate every familiar garden plant and also many that are rare and unusual. The directions given should enable the amateur to be successful even with species supposed to be difficult. Professional propagators and nurserymen will also find the working direction they require. Paragraphs in the text are numbered to make cross references easy and there is also a full index. 3rd. edition.

VIOLETS for GARDEN and MARKET

\$2.25
79 pp., 13 pp. plates (5 in color) 8vo, cloth. (1950) New, in dust wrapper.

A delightful little book covering the culture of Violets. Mrs. Zambra writes as an expert as she and her husband have grown Violets commercially for many years. The last chapter is of interest to those looking for old fashioned recipes. She tells how to make Violet syrup, honey of Violets, conserve of Violets and many other recipes.

A B. C. of the GREENHOUSE

\$1.50
Shewell-Cooper. 320 pp., 4 col. plates 9 gravure plates; 27 line illus; 12 mo; cloth London, 1949.

ROSES IN COLOR & CULTIVATION.

\$5.00
T. C. Mansfield. 261 pp. of text, 80 color plates. 37 figures. Cr. 8vo, cloth, (1947) London, New, in dust wrappers.

This book lists most of the roses now in cultivation (to 1947). Many are pictured in color. There are cultural notes, and long lists and descriptions of the varieties.

CACTUS GROWING FOR BEGINNERS.

V. Higgins and H. T. Marrable. 84 pp. 12 pp. plates, 12mo, boards. London (1947) New. \$1.00

Clear concise directions for raising cacti indoors for beginners.

THE GARDEN OF PLEASANT FLOWERS.

E. G. Wheelwright. 190 pp., 7 pp. plates. 12mo, cloth. London (1948). \$1.75

Mrs. Wheelwright takes us through the English garden at its best. A charmingly written book, with intimate accounts of the plants in the garden. Very good garden advice, especially on unusual plants.

AZALEAS and CAMELLIAS

\$1.75
H. H. Hume. 86 pp. of text, colored frontisp. 6 pp. plates. 12 mo. cloth. New York, 1946.

This is an older book by Mr. Hume, who has now written separate books on Azaleas and Camellias. However, for those who do not wish to specialize, but who are looking for general cultural information, this little volume can be of great value.

POPULAR ORCHID GROWING.

\$1.75
This is of special interest to the amateur Orchid grower and covers the growing of these flowers completely. A more complete description will be given in the next book listing.

PLANTS OF HAWAII NATIONAL PARK

By Otto Degener, Naturalist of Hawaii. A book of human interest emphasizing the culture of the ancient Hawaiians. As many of the plants growing in Hawaii grow likewise in other islands of the Pacific and as many of the ancient Hawaiian customs are like the customs of present inhabitants of other Pacific Islands, this book is actually illustrative of plants and customs of the South Seas. 333 pgs., profusely illustrated with 101 full-page plates and 39 figs; paper cover. \$2.50

NATURALIST'S SOUTH PACIFIC EXPEDITION.

Otto Degener. A narrative based on the writer's stay of eight months in the Fiji Islands as a member of the Anna Archbold "Cheng Ho" Expedition, illustrated with photographs. \$5.00

CORSAGE CRAFT.

\$3.50
G. Reusch and M. Noble. 148 pp. profusely illus. 8vo, cloth. New York, 1951.

For those who wish to learn the fundamentals of corsage making, this book is ideal. Complete pictured instructions are given, plus many pictures of completed corsages to give one inspiration in designing corsages of one's own.

HORTICULTURAL COLOR CHART.

\$10.00
This is the Horticultural Color Chart published jointly by the Royal Horticultural Council. The individual charts in two cloth cases. (2 vols.)

SEED and POTTING COMPOSTS.

\$1.75
By Lawrence and Newell. Rev. 4th edition, 160 pp., 30 figs. 122mo, cloth. London, 1950. New in dust wrappers.

The authors are the developers of the standardized John Innes composts. Their book shows how those remarkable composts save time, reduce the hazards of raising difficult plants from seed and simplify proper potting on the seedlings or cuttings to maturity. Complete formulas and methods of preparation are given.

CLEMATIS THUNBERGII—Traveller's Joy

This is a climbing plant found in many parts of South Rhodesia, trailing over shrubs and trees. The white flowers are very sweet scented, especially in the evening. There are no true petals but the four sepals are petaloid and covered with a soft down.

Being a Rhodesian native, it is not hardy in the North.

SPECIAL OFFER - SMALL SHRUBS

The following are small transplants known as liners in the nursery trade. They are all transplanted stock unless otherwise stated and are especially suitable for either growing on in your nursery or for potting to sell at your road-side stand or retail store. When potted they can be carried over the summer in frames and sales can thus be made at any time.

Prices each in lots of: 1 10 100
AZALEA MOLLIS. .65 .50 .35

In flame shades of orange, yellow, pink. Very hardy; 5-10 inches; 2 yr. transplants.

AZALEA KAEMPFERI. .75 .60 .50
 Torch Azalea. Mixed shades; 6-9 inches; 3 year field grown.

In mauve, lavender shades; 2 yr. field beds transplants.

AZALEA GHENT PONTICA. .80 .65 .60
 Pastel shades of lavender, pink, yellow and orange; very hardy; 5-8 inch; 3 yr. tr.

AZALEA SCHLIPPENBACHII. .60 .50 .45
 Bright pink blossoms 3 inches across and upright habit; very hardy; 2 yr. field bed, transplants.

BIOTA ORIENTALIS AUREA. .50 f.1.40 .35
 Golden Oriental Arbor Vitae. 4-6 inch; 1 year transplants.

BUXUS SEMPERVIRENS WELLERI.
 Weller's Hardy Boxwood.
 1 year bed transplants .50 .45 .40
 5-10 inches; 3 yr. transplants .75 .65 .60

CHAMAECYPARIS PLUMOSA AUREA.
 Golden plumed Cypress; 8-10 inches; 3 year. .70 .65 .60

EUONYMUS FORTUNI CARRIERI.
 A semi-evergreen dwarf bush form growing not over 18 inches in height and width, excellent hedge and specimen plant.
 4-6 inches; 1 yr transplants. .45 .35 .30

EUONYMUS FORTUNEI COLORATUS.
 Excellent procumbent evergreen creeper for shade or sun; withstands drought; a rapid grower in any soil.
 8-12 inch; 1 yr. trans. .50 .40 .35

EUONYMUS FORTUNEI ERECTA.
 Big-leaf Winter-creeper. Large, ovate leaves; semi-evergreen; orange berries at maturity; clings to surface; trims to specimen; it is a hardy, rapid grower; sturdy.
 5-10 in.; 1 yr. trans. .45 .40 .35
 10-12 in.; 2 yr. trans. .55 .50 .45

EUONYMUS RADICANS VEGETUS.
 Wintercreeper. Orange berries; grows very well in dry palces.
 8-10 in.; 2 yr. trans. .50 .45 .35

ILEX ROTUNDIFOLIA.
 Round-leaf Japanese Holly. Evergreen leaves, glossy and ovate; broad upright specimens.
 4-6 in.; 1 yr. transplants. .50 .40 .35
 10-12 in.; 3yr. transplants. .80 .75 .60

JUNIPER ANDORRA. .50 .45 .40
 Purple Andorra Juniper; 6-8 inches; 2 year transplants.

JUNIPER GLAUCA HETZII. .55 .50 .45
 10-12 inches; 2 year transplants.

JUNIPER, IRISH. .55 .50 .45
 J. communis Libernica. 8-12 inches; 2 year transplants.

JUNIPERUS COM. LIB. FASTIGIATA.
 Compact Irish Juniper; 8-12 inch; 2 year transplants. .55 .50 .45

JUNIPER PFITZER COMPACTA.
 Nelson's Blue Pfitzer Variety. An improvement over the regular J. Pfitzer in that it is a closer foliaged, more compact plant, very fibrous in rooting (for good digging) and shapes into a compact low growing spreader with only occasional shearing; very hardy and drought resistant.
 1 yr; open beds, transplants. .50 .45 .40
 6-8 inches; 2 yr. trans. .60 .55 .50

JUNIPER PFITZER AUREA.

Golden tipped growth.
 6-8 in.; 2 yr. transplants. .55 .50 .45
 10-15 in.; 3 yr. transplants. .95 .90 .85

KOELREUTERIA PANICULATA.

Golden Rain Tree. A medium growing tree, with ornamental leaf; long drooping clusters of golden blossoms, like Wisteria.
 2 year field transplants. .25 .20 .18
 8-12 in.; 3 yr. transplants. .35 .30 .28
 12-18 in.; 3 yr. transplants. .45 .40 .35

LARIX EUROPaea. European Larch.

6-10 in.; 2 yr. seedling field beds .25 .22 .20
 10-18 in.; 3 yr. transplants. .35 .30 .28

LARIX LEPTOLEPSIS.

Japanese Larch; 10-18 inches; 3 year tr.

LEUCOTHOE CATESBAEII.

Drooping Leucothoea. Ornamental leathery leaves, pointed foliage; white drooping flowers in the early spring; dwarf to 18 inches; spreading.

2 yr; field bed transplants. .60 .55 .45
 6-12 in.; 3 yr. transplants. .80 .70 .60

PACHYSANDRA TERMINALIS.

Spurge. Evergreen ground cover; does well in shady and dry places. 2 yr. field beds, transplants (3-5 heads) .25 .20 .18

PICEA PUNGENS GLAUCA. Colo. Spruce.

4-6 inch; 3 yr. transplants..... .30 .22 .20
 5-10 in.; 4 yr. transplants..... .40 .35 .33

PIERIS JAPONICA.

Japanese Andromeda. An upright growing Pieris with light green evergreen foliage; new growth being reddish in color. Flowers drooping; white; April.

2 yr; field bed transplants..... .40 .36 .34
 8-12 in.; 4 yr. trans; field. .95 .85 .80

PINUS MUHGO. (Compact)

4-6 in.; 3 yr. transplants. .35 .32 .28
 5-8 in.; 4 yr. transplants. .40 .37 .34

PYRACANTHA COCCINEA LALANDI.

Firethorse. 6-12 in.; 2 yr. transplants. .40 .35 .33

RHODODENDRON CATAWBIENSE.

Reddish purple; an upright grower. These are grown from seed from selected plants; not a collected item.

5-8 in.; 3 yr. transplants .85 .80 .70
 8-10 in.; 4 yr. rtansplants. 1.00 .95 .93

RHODODENDRON HYBRIDS.

These plants are grown from seed of selected parentage of red plants. A good range of colors from pink to purple, red, lavender. They have proved hardy. They were grown in good loam soil and have fibrous roots.

5-8 in.; 3 yr. transplants. .90 .80 .70
 8-10 in.; 4 yr. transplants. .95 .94 .92

THUJA OC. DOUGLAS AUREA.

Golden Douglas Arbor Vitae. Bright yellow tips; upright growth like the American Arbor Vitae.

6-8 in.; 2 yr. transplants. .60 .55 .50

THUJA OC. ELEGANTISSIMA LUTEA.

George Peabody's Arbor Vitae. Pyramidal growth, yellow tipped foliage over very dark green; does not shed.

6-8 in.; 2 yr. transplants..... .55 .50 .40

8-10 in.; 3 yr. transplants. .65 .60 .55

THUJA OCCIDENTALIS GLOBOSA.

Woodward's Globe Arbor Vitae.
 6-10 in.; 2 yr. transplants..... .60 .55 .50

VIBURNUM OPULUS NANA.

Dwarf Bush Cranberry. Does not grow more than 15 inches high and spread. The foliage is very ornamental; excellent for low edging or for accent planting.

2 yr. Field bed transplants. .50 .40 .35

The above are prepaid to your address by parcel post. Delivery as soon as possible in the spring. Orders should be placed before Feb. 1st at the very latest to assure a selection. We can quote on other sizes. Why not start some of these desirable shrubs now and have perfect specimens when you have space for more plants?

HARRY E. SAIER -- Dimondale, Mich.

Growing Amaryllis Bulbs from Seed

By Mrs. Nicie D. Crown, Florida.

Make a seed bed about five feet wide; spade or dig the soil well to about eight inches. Shovel this soil out and place in the bottom of the bed some well rotted cow manure. I use a mixture of loam, leaf-mold; the latter from under a Hickory or Oak.

They like a soil that does not pack. I use some commercial peat which I mix in with the top three inches of soil. A good grade of garden soil is all right to use in this mixture; some growers use one-third each. I pick new ground for my beds and use less than one-third peat. Water well and let it stand over night, if possible. This watering helps condition your ground and makes it much nicer to mark your rows. With a thin board or the back of an old knife make crack-like rows between the boards. Into this crevices place each seed ON EDGE like placing dimes in a row. Placing each seed about one inch apart in the row.

You can have your rows three or four inches apart according to your space. Cover the seed by smoothing a little soil over them with your hand. Water again so as to wet the seed. Keep the bed moist so as to get the seed started and make certain that the moisture is there but not soggy wet as that will cause the seed to rot.

Here in Florida, I have taken note on the time for germination; from the day planted, some will be peeping through the soil in just two weeks and in a month, all were up.

These plants require shade from direct sun and I make my plantings near shade trees so the direct rays of the sun does not hit them. You can make cloth shade but have it about ten inches from touching the bed level so that air can pass over them, this is very important.

After they are up and growing, they like the soil more on the moist side, rather than dry. It does require attention to get these plants started but they are so very beautiful and last so many years that they are well worth the trouble.

Some growers pour a little sand in the crevices before placing in the seed, but I find the soil I get here has plenty of sand in it.

GERMINATING TROLLIUS AND ACONITUM SEED.

Both are not easy germinatory and Mrs. Irene Friedman of Burbank, California asks for special directions. Possibly some our readers have had experience in them and will send in their remarks.

It is possible that both would not be hurt by freezing; that is planted in the fall but we would think that Aconitum should be covered or held in a dark part of the room while germinating. The Trollius, being an early bloomer, should be started in the fall much as the Violas. We may be wrong here so why not someone with experience with them write? We would like to give Mrs. Friedman a better answer.

LILIES FOR FLORIDA.

Mrs. Howard L. Kline of Apopka, Florida ask for a list of varieties and species of Lilies that will grow satisfactorily in Florida. We are not well posted and wonder if some of our readers can give their experiences?

Lucky is the land that is tilled by the men who own it. James Oliver.

SUBSCRIPTION PRICE \$2.00 12 ISSUES

In the next issue

The feature article in the next issue will be on the flower garden at Monticello, the home of Thomas Jefferson. He was especially interested in his garden, the planting of trees; it would be nice if any of our readers have items of interest; it is possible that some have some good pictures.

In addition to the above, there will be a special article on "Getting the most from the small Garden", which will cover a suggested method of planting in the small gardens.

It was with pleasure that we could publish something of the gardens at the Hermitage, the home of Andrew Jackson. The times during which President Jackson lived were not ideal times for the establishing of ornamental plantings but, never the less much was accomplished. Personally, I think he was our most outstanding President; two or three points stand out especially, viz., he paid off the national debt and thus the only President with such a record! he refused to make a campaign, saying, that if the American people wanted him for their President, he would serve but he would not seek the office—a very noticeable change with the recent campaign; and in his military career, instead of getting an immense salary, he actually went in debt himself, to properly provide for his troops. Few Americans know that if it had not been for the smallness of the politicians in power at the time of the war of 1812, Jackson would have added Canada to the United States.

SOUTH RHODESIAN FLOWERS

It is difficult to describe the Gladiolus species which grow on my farm. The blooms are rather small, not hooded, whitish and with purple-brown narrow wavy lines. Upper and lower petals, green shading towards the throat, accentuated on lower lobes. The leaves are narrow and pale blue-green; flower stem to 3 feet. Interesting but rather weird looking and far from common. They come into bloom late in the season.

I have collected seed of Clematis Thunbergii, sweet scented; Peltophorum africanum, Rhodesian Wattle and other attractive flowers.

The plant that gives me the most pleasure is the lovely Everlasting—Helichrysum, all white and adorned with sweet, small pink rosettes which later open into daisies with a deep inner crimson bract. It is a compact shrublet growing to about 6 inches high, is a sun lover and drought resistant and an excellent flower for the rock garden.

We have just had our winter and August starts our spring; the other day, however, we had a severe freeze, and my house boy picked rings of ice a quarter of an inch thick from the water, a surprise to him. My seedlings of the Cape Silver Tree, Leucadendron argenteum, seemed unaffected by the cold.

By Barbara Ingle, South Rhodesia.

SCORZONERA

(skaur-zoh-NEE-rah) This is a vegetable root that you should try in your vegetable garden. It has a long Carrot-shaped root which is black outside but white within and it is cooked and eaten like Salsify or Parsnips; the culture is also the same.

It is claimed to be very nutritious and healthful and possessing the anti-bilious properties of the Dandelion. The tops, when young, can be used in salads.

It is hardy and the roots can be left in the ground over winter and dug early in the spring, like Parsnips. It is sometimes called Black Salsify. If you do not find it in the seed catalog, packets costs 20¢.

The Beautiful Butterfly Iris

By Charlotte M. Hoak

(The following appeared in the September bulletin of The Bulb Society, from which it is reprinted.)

The beautiful Butterfly Iris, designated "Spurias," certainly do not deserve the scientific name they are forced to go by. Why they got this name nobody seems to know.

These Iris come from Southern Europe and parts of Asia whose climates are very similar to our semi-arid one.

Monnier is the pure yellow form of ochroleuca Golden Iris. Aurea comes from Kashmir, whose famous flowery vales are the homeland of some of our choicest flowers.

The first improved hybrids were raised in England more than fifty years ago. In America we were content to grow the old original species and the English hybrids. The late T. A. Washington of Nashville, Tennessee raised and named a series of fine blue Spurias; his wife, who has carried on his work, continues with blues and bronzes. A fine blue is Blue Rocket. Note the one called Harpeth Hills.

In recent years the activities in breeding new and distinctive Spurias have centered in Southern California. A pioneer worker, the late Eric Nies of Hollywood, has done outstanding work. His breeding work with Spurias began with Iris Monspur, which is a hybrid of I. Monnier and I. spuria from Michael Foster, and the species I. ochroleuca; and from this combination of genes of the yellow self (Monnier), the dark blue (spuria) and the yellow bicolor (ochroleuca),

The Hermitage

(Continued from Page 353)

example; to the wretched a comforter; to the prosperous an ornament; her piety went hand in hand with her benevolence, and she thanked her Creator for being permitted to do good. A being so gentle and so virtuous slander might wound, but could not dishonor. Even death, when he bore her from the arms of her husband, could but transport her to the bosom of her God."

The simple inscription on his is:

General Andrew Jackson
Born March 15, 1767
Died June 8, 1845

THE HERMITAGE

The Hermitage, near Nashville, which is owned by the state of Tennessee and maintained and operated by the Ladies Hermitage Association, an organization founded in 1889, by a group of patriotic women for the purpose of preserving The Hermitage, home of General Andrew Jackson, as a National Shrine and to perpetuate his memory as a soldier, statesman and President of the United States.

The Shrine attracts each year thousands of visitors, not only from this country, but many from foreign lands.

Visiting hours:

8 A. M. to 4 P. M. October to April
8 A. M. to 6 P. M. April to October
Admission: Adults 50¢; Children 10¢.

All members of the Armed Forces in uniform, admitted without charge.

he got a break in color, size and form. In 1941, he registered Bronspur and Saugetuck, both in shades of brown, a new color in the Spurias. In 1942, came Azurea Dawn, Dutch Defiance, Michigan State, Swallowtail, Lark Song and Pastorale. In 1944, came Fifth Symphony and two sensational varieties, Two Opal and Russet Flame. Color Guard, a medium blue, was registered in 1948. Still later came others, none finer than Zephyrosa with its flowers of wonderful substance.,

Milliken's Wadi Zem-Zem is a clear, fine yellow with a flower of great substance. Those who have watched Tom Craig move into this field with his superior seedlings are looking eagerly for the fulfillment of his early promise. Pale Big Cloud, nearest white of all the Spurias, is a fine one. Ruffled Blue Pinafore and Blue Valentine are two of his outstanding ruffled blues. Sun and Shadow is an unusual lavender-grey. Sweet Butter is a large, broad creamy yellow.

Spuria Iris are particularly fine in our area. With little care they grow like weeds. Lovers of the sun, they are most effective as accent points in Iris and hardy borders. Their fine foliage and tall stems, surmounted with colorful flowers of many hues, are all that can be desired for backgrounds. Now is the time (Sept.) to plant and transplant. Set groups well apart, for your plantings will last over many seasons without thinning out and transplanting. While you may not be able to indulge in some of the higher priced novelties, do not omit Wadi Zem-Zem and some of the lower priced Nies's hybrids.

DISTRIBUTION OF SPECIES

Have you thought about the distribution of the various genera over the world? Almost invariably they spread east and west and not across the equator.

It would be interesting to know why some genera have species in both hemispheres and others do not. It is easy to see why seeds can be spread by either the birds, wind or water and all three tend to keep in its hemisphere..

Why is the Iris only in the northern hemisphere? Could it be on account of its particular type of seed? Seed that can stand much ill treatment could, during the course of centuries, find their way across the equator while other species, whose seeds perish easily, such as the Iris, would almost be impossible to survive a trip to the southern hemisphere.

DAHLIA ROOT STORAGE

It is important to set Dahlia clumps upside down, after digging so that any excess moisture will drain out of the crowns.

Where you have but a few prize clumps, it is best to leave what soil is on them and only divide them in the spring when ready to plant. Dahlia toes should always be laid flat in the trench or hole made for them when planting; never "stand" them up.

DORONICUM CORDATUM

It is worth a prominent position in any rockery. It is a deciduous species and dies down each winter. It grows 6 inches high but in extra good soil will reach 9 inches.

The flowers are two inch-wide discs of pure gold, starting in early May and continuing to late summer. Give it a place in full sun, in a deep fibrous loam that does not dry out in August.

Spring Garden Suggestions

These two columns have been reserved for your own garden record for the month. Make notes on what should be done next year at this time; new plants added this month and many other reminders that will be of value in your gardening operations. The SAIER'S GARDEN MAGAZINE is designed to be useful next year as well as this and copies will be valuable for future references. Indexes will be provided in later issues so that a quick reference can be made to items of interest, especially descriptions and culture.

Campanula Hybrids

Just some notes on various Crosses.
C. Wockeri: produces no seed.
C. haylodensis semi-plena: 5 inch flowers; a cross between *C. cochlearifolia* and *C. tubinata*; wide open violet flowers, semi-double. this also does not seed.
C. warleyensis: does not form seed; try colchicine to change chromosomes for seed.
C. Wockeri x waldsteiniana x tommasiniana, a delightful little plant with a shower of wide open bells on 4" stems.
C. pulloides: *pulla* x *turbinata*; less than 4" high; flowers drooping light purple; prefers partly shaded positions.
C. stansfieldii; (?) *carpathica* x *tommasiniana*; stems rising from graceful mats of foliage, each stem with a single drooping wide mouth violet bell; produces few seed.
C. pseudo-raineri: *turbinata* x *raineri*; wide silver shaped flowers on short stems over tufts of pretty hairy leaves 3" tall; few seed ever formed.
C. kewensis: *excisa* x *arvatica*; strong constitution; tiny plant, less than 4", medium sized funnel-shaped bluish purple flowers.
C. warleyensis: masses of semi-double wide mouth flowers.
C. halli: pure white; 3" high; (?) *cochlearifolia* x *portenschlagiana*; has under ground runners and best as crevice or rock wall plant, like its parents.
C. rotarvatica; *rotundifolia* x *arvatica*; 3"; smothered with broadly funnel-shaped somewhat lavender colored flowers.

We would like to have some plants of this hybrid.

COBAEA—an EASY CLIMBER.

A popular and easily grown climber for the greenhouse is *Cobaea scandens*. It is remarkable for the change in color of the flowers, starting as green and then showing white, pink and finally a rosy purple and when in full bloom, all colors are displayed at the same time.

It is adapted for the cool house and if given ample space for proper growth, its flowers will hang in beautiful festoons.

Sow seeds in February or March, in a warm house. It must be kept growing and pot as required (when roots are well formed in the pot); when thus grown it begins blooming in August.

A soil made of a good loam with some leaf mould and sand, is best. Water freely during the summer.

There is a variegated variety with pretty spotted foliage; this must be increased by cuttings taken in July or August. Firm young side shoots should be placed in a close propagating frame till they are rooted. Old plants can be pruned back hard, in February and then given fresh soil.

CYTISUS ADAMI.

The origin of this hybrid is of interest. It was the result of a graft, made by a Mr. Adam, between *Cytisus purpureus* upon *Laburnum vulgare*. It bore pink, yellow and purple flowers. The pink was the hybrid color. The wood of the purple flower was the same as *C. purpureus* and that of the yellow, *L. vulgare*. The outer tissue of the pink hybrid was *C. purpureus* and the inner tissues those of *L. vulgare*. This hybrid graft was propagated and now known as *Cytisus Adami*.

helveticus: (hel-VET-ik-us) Swiss or from Switzerland.

The Capers of Commerce

By Dr. Otto Degener

My wife and I just completed three fascinating September weeks in and about Dubrovnik, Yugoslavia. Instead of living in an expensive tourist hotel, we engaged a double room overlooking the Adriatic in a private home. The room, with breakfast, cost but \$1.00 per person per day. We did not take our other meals in restaurants but early mornings sauntered to the open air markets to buy from peasants, honey sweet, fresh, ripe figs, either of a purple or yellow variety, for 30 Dinar per kilo (about 5¢ per pound); green or purple grapes for 30-40 Dinar; and the one inch thick fruits of *Sorbus domestica*. These last resemble a greenish apple often with reddish cheek. When they have turned soft and brown, they taste sweet, a bit mealy and like a recently decayed pear. We ate this indifferent fruit only once; for the sake of experience. Bread, cheese and sausage completed our inexpensive but satisfying repast, taken in our room or picnic style in the open.

Dubrovnik, in the Province of Dalmatia, is a quaint city of 16,000 souls. Until her few canals were filled with city trash and rubble, she was not unlike a miniature Venice. The massive, encircling, fortified wall is of limestone blocks. While walking along its top, a privilege allowed for a few Dinar, we looked down upon the panorama of city roofs on one side and thinly scrub- and Cypress-covered (curiously spelled) Srdj Mountain and the blue Adriatic on the other.

Two plants that attracted our attention by growing out of the thin crevices of the city wall were *Campanula pyramidalis* and *Capparis spinosa*. The former is an herb with a few stiffly erect, pale green stems about as thick as my finger. These bore a mass of pale blue flowers. The latter plant is a shrub forming a messy tangle of intertwining branches that hang three to six feet over the face of the city wall, even where winter storms can drench them with ocean spray. The leaves of this halophyte, or salt tolerant plant, are roundish, pale somewhat fleshy, and armed with spiny stipules. The flowers, about two inches across, are whitish and furnished with many erectly curving stamens. They bloom only at night. In due time, fleshy red pods appear that break open irregularly.

Some days later, we visited the Agricult-

ural Experiment Station, overlooking the harbor at Gruz. Here the government botanist, Mr. Zdravko Devetak, showed us various plantings. Among them was a thriving field of cuttings of a horticultural variety of *Capparis spinosa*. This furnishes the caper of commerce...

The Caper of commerce is cultivated from Greece through Yugoslavia and Italy to southern France and Spain. The plant is propagated mainly from cuttings in warm dry regions, preferably on terraces exposed to sunshine. When established it furnishes for fifty years or so, from May to September, its crop of young flower buds. These are harvested daily lest they become large and coarse, and lose their characteristic pungent flavor. They are then allowed to wilt a few hours in the sun before being immersed in salty vinegar. This is renewed weekly for the next few months. These capers, rich in rutin and some ethereal oils, are put up in jars and shipped all over the world for use in sauces so familiar to all of us.

Capparis sandwichiana, with much larger, creamy flowers, and with orange pods, grows wild in Hawaiian Islands. I plan sending seeds of this species to Prof. Devetak for possible hybridization work.

Interested in plants and not in politics, we off-hand noted nothing particularly strange about Marshal Tito's communist type of government in Yugoslavia, except that the olive orchards were going to waste with no young trees planted to replace those that had died and that a shortage existed in living quarters. One young man we met, for example, had not yet been able to get a room for himself and bride since their marriage four years ago. Both were still obliged to live, separated, with their respective parents.

We had set out for Yugoslavia with two suit cases filled with personal belongings of U. S., and German manuacture. By the time of our departure, due to purchases and trading, our suit cases were filled instead with beautifully embroidered shirt waists, small woven rugs, a few laces, silver jewelry reminiscent of Navajo Indian work and a silver Mokka coffee set. We also returned with two large bundles of Dalmatian herbarium specimens collected by my wife and myself and identified by Prof. Devetak, and a cheese box full of Cypress seed for you of Dimondale.

ious to know what was on pages 278 to 336, the missing pages.

Two items that particularly interest me right now are the Camellia-flowered Impatiens mentioned on page 259, and the Primula sikkimensis on next page. Bet I could grow 'em here.

Kinda late with any remarks on Rose multiflora, but I'll just say: DON'T!! For your garden's sake, DON'T!

Thanks for your kind letter, Mrs. Combsie. Before I forget, I want to thank Plantsmith for his many interests in our magazine and I will mention his plant food which must be good for so many of his customers have written us. I am sorry not to be able to send back copies but they are all mailed out.

LYSMACHIA QUADRIFIDA.

We have a request for the yellow flowering Lysmachia quadrifida from a New York reader and if one of our readers is growing it, please advise us.

SPECIAL ROSE OFFER

RED VARIETIES

AMERICAN BEAUTY. Very double.
AMI QUINARD. Deep velvety red.
C. K. DOUGLAS. Bright scarlet.
E. G. HILL. Dazzling red.
ETOILE DE HOLLANDE. Dark red.
F. S. KEY. Large rose; red.
GRENOBLE. Dark red.
HADLEY. Rich crimson.
MCGREDY'S SCARLET. Velvety crimson.
NIGHT. Deepest blackish crimson.
POINSETTIA. Pointed buds; red.
RED COLUMBIA. Rich velvety scarlet.
RED RADIANCE. Free blooming red.
ROUGE MALLERN. Dark red.
SENIOR. Pointed buds; free blooming.
SENSATION. Scarlet crimson.
SYRACUSE. Scarlet crimson.
RED TALISMAN. Scarlet crimson.

PINK VARIETIES

BRIARCLIFF. Brilliant rose-pink.
MRS. CHAS. BELL. Shell pink.
CYNTHIA. Sensational pink.
EDITOR McFARLAND. Glowing pink.
J. L. MOCK. Pointed pink buds.
PAUL NEYRON. (H. P.) Rose-pink.
PICTURE. Velvety clear pink.
PINK RADIANCE. Free blooming pink.
SALMON RADIANCE. Salmon-pink.
SHELL RADIANCE. Shell pink.

WHITE VARIETIES

CALEDONIA. Lovely pure white.
F. K. DRUSCHKI. (H. P.) Large white.
K. A. VICTORIA. Dandy white.
KONIGAN LOUISE. Very double white.
SNOW QUEEN. (H. P.) Snow white flower.
WHITE AMERICAN BEAUTY. (H. P.)

MULTICOLOR VARIETIES

ANTOINE REVOIRE. Rose, carmine and yellow.
BETTY UPRICHARD. Two-toned.
CONDESA DE SASTOGA. Red and yellow.
EDITH NELLIE PERKINS. Two-tone.
PRES. HOOVER. Yellow, red and gold.
TALISMAN. Bright red and gold.

POLYANTHAS ROSES

ELSIE POULSEN. Rose-pink.
FLORADORA. Scarlet red.
GLORI MUNDI. Orange-scarlet.
GOLDEN SALMON. Pinkish orange.
IDEAL. An ideal red.
IMPROVED LAFAYETTE. Deep glowing red.

YELLOW VARIETIES

GOLDEN CHARM. Deep yellow.
GOLDEN DAWN. Flushed old rose.
GOLDEN OPHELIA. Golden yellow.
GOLDEN SASTAGO. Soft clear yellow.
LADY HILLINGDON. Apricot.
LUXEMBOURG. Coppery bronze.
MRS. P. S. DuPONT. Yellow.
ROSLYN. Golden yellow.
SOUER THERESE. Golden yellow.
SUNBURST. An old favorite.
WESTERN GOLD. Clear yellow.
YELLOW TALISMAN. Pale sulphur yellow.

CLIMBING ROSES

BETTER TIMES. Rose-pink; pointed buds.
BLAZE. Brilliant scarlet.
CALEDONIA. Pretty white.
ETOILE DE HOLLANDE. Dark red.
FLORADORA. (P.A.F.) Scarlet red.
PAUL'S SCARLET. Popular red.
PINK RADIANCE. Cameo pink.
MRS. P. S. DuPONT. Golden yellow.
RED RADIANCE. Bright red.
RED TALISMAN. Pointed buds.
TALISMAN. Bright red and gold.
HOOVER. Yellow, red and gold.

We are pleased to be able to offer the following HARDY FIELD GROWN — TWO YEAR OLD Roses.

They are all STRONG HEAVY BUSHES. Delivery can be made most any time; state when wanted. These large bushes are pre-paid. NO ORDER FOR LESS THAN \$2.00, please. ORDER EARLY.

PRICES: ANY 3 for \$2.00; ANY 8 for \$5.00; ANY 25 for ONLY \$14.00; prepaid.
HARRY E. SAIER, DIMONDALE, MICH.

Growing Bulbs Indoors

The main essential to success in growing and forcing bulbs indoors during the winter is to ensure that a good root system has been developed before the bulbs are brot indoors. The bulbs should be potted as soon as received and they should have a period of at least six weeks in a cool, dark place or plunged outdoors, covered with sand or washed ashes, before any attempt at forcing is made.

A good soil mixture may be made up of two parts loam, one part leaf mold or peat, half part sand with a 5-inch pot of bone meal added to each bushel or two of the mixture. It should not be sifted too finely, a half inch sieve should be about right. The pots should be 'crocked' well, with a layer of rough peat or leaf mold to keep the drainage clear; loosely fill the pot with the soil and press the bulbs firmly in; the bulbs should be completely covered except in the case of hyacinths, which should have the tips showing.

Water the pots of bulbs thoroughly and plunge; on removing from the plunge-beds, a good watering should be given and the young growth should be shaded until they become green.

PARCEL POST!!!

We just mailed an order to Arizona consisting of 4 packets of the new Japanese Morning Glories, a half bushel paper bag of Vermiculite and the same of sphagnum moss, total weight 7 lbs. and total selling price, \$3.50.

The postal charges were \$1.22! Or 35% of the sales price

To show how public officials figure for 'the people's benefit', this same 7 pounds could have been sent in 7.9 ounce packages, to 14 different postoffices in the farthest sections of Alaska, to Panama, to Hawaii and to Maine and California, for the total postage of 91¢.

Is there any business in the country that would manage its affairs in this way?

If Summerfield can manage a Chevrelot agency so successfully, why cannot there be some business-like changes made in the post office? A further suggestion — why are not all the franked letters sent out by the various office holders and government departments, metered and the postage charged to their various accounts? There would be a much different postal report made!

GROWING COLEUS FROM SEED.

Few plants have such highly colored foliage as does the various strains of Coleus. They are highly ornamental and especially useful for late spring and summer decoration.

A liberal diet and plenty of sun-light, are essential for highly colored plants.

Sow the seeds the later part of February and in following months. Sow seeds thinly on top of a firmly packed, light soil. The soil should be moist; cover seed with fine milled sphagnum moss and keep in a 65 degree temperature. They should be shifted to larger pots as they develop. Discard those plants that are of a poor color, keeping only the very showy specimens.

A slight pinching of some plants will tend to make them more shapely pot plants, especially when fair sized pot plants are to be sold.

Always water indoor plants in the morning; the evaporation cools them and could tend to set them back by night watering.

IRIS VARIETIES RECOMMENDED TWENTY FIVE YEARS AGO

Wister recommended Iris varieties in his Iris book, written twenty five years ago and some of them are still being grown today!

In the dwarfs are Azorea, Black Midget, Glee, Marocain, Socrates and including the Chamaeiris. Of these, Marocain is still considered a good variety.

In the Tall Bearded section, we are still growing several and consider them worthwhile varieties.

Ambassadeur, Corrida, Fro, Iris King, La Neige, Lord of June, Ma Mie, Rhein Nixe are eight varieties still in demand and in his "100 Best Varieties".

In a list of a few outstanding "novelties", none are well known today! This can be true of many of the novelties being offered today. Few ever turn out good enough to last a quarter of a century!

HARDINESS OF LOUISIANA IRIS

A testing program on the hardiness of the Louisiana Irises was inaugurated two years ago, the results of which are not final. Two years ago, also, some adventurous Irisarians bought several varieties from me and for two years I have sent plants as prizes to the large Mio Iris Show. To date I have had no complete report.

Some of the Louisiana (hexagona) Iris species should prove hardy as some of the group range into Indiana, but others are not likely to survive. When the testing program is complete, the data will probably get much circulation for we are a publicity minded group of enthusiasts.

— Sidney L. Conger, Louisiana.

NOTE: We would be interested in hearing from any of our readers who are growing any of the southern species of Iris in the northern states.

NEW AFRICAN VIOLET BOOK

A very complete variety list of African Violets has recently been published. It was written by Mrs. Carolyn K. Rector, who also wrote the Culture of the African Violet, which is offered by us.

This new book lists many hundred varieties, gives the originator, the date and a brief description. It will be especially of value to those interested in growing this popular flower.

INTERESTED IN IRIS

We are just in receipt of a long list of rare Iris species from Robert C. Henningsen of Portland, Oregon, who is one of those gardeners like the writer, that enjoys the cultivation of a collection of the species of Iris.

He writes, December the 5th "This has been a very good Iris year for me; some form of Iris has been in bloom every month, now I. stylosa marginata and alba are giving buds every few weeks and they bloom out indoors."

Any of our readers who are likewise interested, please write and no doubt both Mr. Henningsen and myself can make some trades!

GERMINATING ACACIA SEED.

After planting Acacia seed, pour very hot water over the bed and then cover with burlap, which can be left on till germination starts. Some nurserymen soak the seed in hot water and leave for 12-24 hours till cooled.

It is a good practice to water your house plants, during the winter months, with warm water.

Spring is in the Southern Hemisphere

The October garden magazines from the Southern Hemisphere are just arriving (Dec) and they are full of plans for the immediate starting of seeds for their coming summer! Here in Michigan, there is a little snow on the ground and I am worrying whether I will have to call the Standard Oil man for fuel oil before Christmas. Any way we have had a rather mild fall so far and planting was done later than usual. We purchased some Iris from a Kansas grower that came in during late October; they evidently were dug in early July! They were planted in some raised beds and watered and as it was rather sun-shiny, they were covered lightly with straw; later it rained quite a little and the straw was pulled off the beds but now the ground has frozen some and this covering was put back. As soon as we can get the time, more straw will be put on these Iris to prevent their heaving out of the ground. We wonder how many will survive?

About the Hydrangea

By M. S. Brainard, Oregon.

Throughout most of the country they can be chanced to winter out of doors. Where too rugged conditions prevail, may be they can be wintered under a heavy mulch or brot in to cool winter quarters.

But the two bugbears of growth are insufficient water and food shortage. Remember Hydrangeas need plenty of water! And they are hogs for rich food, especially well rotted manure.

They "slip" easily, preferably in sand or light soil and good dormant hardwood tips may bloom in a couple of months. Green, soft tips, will require a dormant season before blooming. Should you have a potted, blooming plant, cut it back to two or three nodes above the surface when the bloom is gone, and hold it over. Always cut faded blooms well back.

Hydrangeas are in our National colors, although there is no natural blue among them. Starting with the reds, try Charm, or maybe Strafford. If you feed the latter heavily you will get a deep, gorgeous pink. Regula is a good fixed white and rugged, and Engle's White, much heavier though with a tendency to sere in extreme heat.

Now we will have to make our own blues unless your soil is very definitely acid. Hamburg and Altona, though normally delicate pink, blue most easily with heavy doses of aluminum sulphate, either in solution or watered in; but start treatment even before the buds begin to show.

Ferrous sulphate and magnesium sulphate (Epsom Salts) are good dessert for any Hydrangea, too, and may tint your plants, depending on your soil conditions.

But if your soil does not produce good, true color blooms, sweeten it up with lime. This is especially recommended where your plants bloom in washed-out purples or lavenders but don't expect over night results; it takes a growing cycle to permeate the plant's whole system, either way. On house plant Hydrangeas, water that just makes you conscious of the Epsom Salt flavor, is fine.

Hamburg is an old and probably most widely distributed Hydrangea variety. It can be easily told by its bright pink blooms with notched petals.

If you "blue" the reds you may come up with some wonderful lavenders — and some not-so-wonderful colors!

NOTE: Mr. Brainard is a propagator for Brookside Azalea and Bulb Farm in Oregon.

THE RUSSELL LUPIN

In warm climates, treat them as an annual, sowing the seed early in the fall and then discard the planting after it flowers.

Do not give lime to Lupins. They should be well fed but not too much nitrogen.

DAFFODILS FROM SEED

An Australian grower writes in the Australian Garden Lover the following:

There is a great opportunity for young people to become interested in growing the Daffodil from seed. Apart from seeing your first Daffodil bloom, there is a far greater thing; you will find yourself absorbed in the

wonders of Nature; you will forget all the hundreds of things that tend to entangle you and spoil the real joy of living. You will become the instrument of the Creator and in time, if you have sustained sufficient interest, you will learn much that books and sermons do not teach. You will come to appreciate how wonderful and beautiful this world is.

ZAMIA FLORIDANA SEED WANTED.

Does any of our readers have this plant growing in their neighborhood? It is native of South Florida and known as Coontie.

SUBSCRIPTION PRICE \$2.00 12 ISSUES

MINNESOTA WILD FLOWERS

MINNESOTA NATIVE PLANTS

The following plants are delivered postpaid during the spring and again in the fall, when they are in condition for shipping.

The prices asked are very low and any one wanting these beautiful natives from the far North should order NOW.

AQUILEGIA CANADENSIS. The American Columbine. Good for the rockery or the border; sun or part shade.

ASARUM CANADENSIS. Wild Ginger. Good ground cover for shady places; if you need a quantity ask for special price.

ARISAEMA TRIPHYLLUM. Jack-in-the-Pulpit. A hard-to-find wood plant that should be in every wild garden.

CAULOPHYLLUM THALICTROIDES. Blue Cohosh. Deep blue berries in fall; 2 ft.

CLINTONIA BOREALIS. Bluebeads. Small lily-like bloom in spring; very dark blue berries in the fall; acid soil.

DODECATHEON MEDIA. Shooting Stars. White to rosy purple Cyclamen-like blossoms in the spring.

GERANIUM MACULATUM. Wild Geranium. Rosy pink blooms for the rockery or border; 1 foot high.

HEPATICA TRILoba. Round Lobed Hepatica. White to deep blue blossoms; acid.

IRIS VERSICOLOR. Blue Flag. For moist places; see Iris list for other species.

MIMULUS RINGENS. Monkey Flower. Blue Snapdragon-like blossoms with yellow centers; 2 feet high.

PARNASSIA PALUSTRIS. Grass Parnassus. White buttercup-like blossoms on slender stems.

POLYGONATUM BIFLORUM. Solomon's Seal. Drooping white bells, followed by nearly black berries.

SANGUINARIA CANADENSIS. Blood Root. White blossoms in early spring; showy leaves until late summer.

TRILLIUM CERNUUM. Nodding Trillium. Drooping white blossoms.

UVULARIA PERFOLIATA. Merrybells. Drooping yellow bells in the spring; easy to grow in the shade. It is good.

VIOLA BLANDA. Sweet White Violet. Fragrant small white Violet for naturalizing in the wild garden.

VIOLA RUGULOSA. Tall Stemmed White Violet. Blooms nearly all summer; ideal for your wild garden, too.

VIOLA CONSPERSA. Dog Violet. Pale blue flowers in early spring; for the wild garden for early flowers.

ATHYRIUM FILIX-FEMINA. Lady Fern. One of the easiest ferns for shady places in the border or wild garden.

DRYOPTERIS DILATATA. Mountain Fancy Fern. Beautiful evergreen fern; best in moist shady places in the border or in the wild garden or woods.

DRYOPTERIS LINNEANA. Oak Fern. A beautiful tiny six inch fern with branched fronds that should go well in any shady moist place where small ferns would do.

DRYOPTERIS PHEGOPTERIS. Narrow Beech Fern. Arrowhead-shaped fronds on 6-8 inch stems; another fine fern for moist shady places in the border or wild garden.

DRYOPTERIS THELYPLERIS. March Fern. Upright fronds to 18 inches; moist spots in either sun or shade.

PTERETIS NODULOSA. Ostrich Ferns. For sun or shade; a graceful fern growing to 5 feet; a sight in the woods or wild garden where the sun gets thru.

PRICES: On your selection of ANY 6 plants \$1.80; ANY 12 for only \$3.00; or you can select 35 plants any way you wish for only \$8.00; postpaid. Certainly a bargain. Remember these are all HARDY.

AMELANCHIER CANADENSIS. June Berry; a hardy shrub.

ARONIA MELANOCARPA. Black Chokeberry; wild life shrub for food and shelter.

CORNUS ALTERNIFOLIA. Pagoda Dogwood.

CORNUS STOLONIFERA. Red Osier Dogwood.

ILEX VERTICILLATA. Winterberry; a good shelter shrub for wild life.

DIRCA CANADENSIS. Leatherwood. A small plant 6-12 inches high.

SAMBUCUS PUBENS. Red Berried Elder. This is a good shrub for a game shelter as well as for food.

SYMPHORICARPUS RACEMOSUS NANUS. Dwarf Snowberry; a good shrub for difficult embankments.

VIBURNUM DENTATUM. Arrowwood.

VIBURNUM LENTAGO. Nanny Berry.

PRICES: ANY TWO PLANTS for \$1.00 or ANY 6 for only \$3.50; postpaid. If you wish any quantity for planting for bird shelter and food, write for special prices.

CYPripedium ACAULE. Pink Moccasin Flower.

CYPripedium PARVIFLORUM. Small Yellow Lady Slipper.

CYPripedium SPECTABILE. Showy Lady Slipper.

CYPripedium PRICES
ANY TWO for ONLY \$1.50; ANY six for only \$4.00. This price is very low for these very hard-to-find plants.

SEED COLLECTING

We receive many letters from all over the world as to the sale of some native seed the writer has. We are always glad to have this information but in some cases, we fear, the collector has the impression that we could use pounds of his seed. This is not the case.

Usually, where there is a good demand for a certain species, there are commercial seed growers and collectors who have established themselves as a reliable source of supply and it is usually best to trust the supply to these people and more especially on such seeds that are used by nurserymen or in the greenhouse. However, there are many nice native flowers, trees and shrubs that are not commonly found offered in seed lists and it is these that we would like to have sources.

It is best if one has the plant close at hand where there is little effort required to gather the seed when ripe. The seed should, as a rule, be gathered as soon as it is ripe, a little early is better than very late. Place the seed on some tray where there is a good air circulation but not direct sun. When the stems are dry they can be placed in a cloth bag and mailed in to us just as they are; we can do the cleaning easier and better with proper cleaning equipment than can the collector. If you do not have bags, we will be glad to mail you some.

Seeds gathered outside of the United States must be free from ANY soil and also should have as little stems as possible, in order to pass the government inspectors because, while the seed itself will look and be free from diseases, it could easily happen that some leaf or stem disease or even insect, be present on this material. So in the case of foreign seeds they will have to be rather clean but not necessarily graded.

All foreign seeds should be labeled with the botanical name, on each package. Some seeds are strictly prohibited while we must secure permits on others and some must be mailed under the yellow and green tags, which we can mail you. All types of bulbs, growing stocks, etc., must be shipped under the green and yellow government tags.

On all such seeds the usual payment is by an exchange credit but in certain cases other arrangements are made; this should be taken up in detail by letter. Seeds from the Southern Hemisphere should be wrapped in wax paper if coming by ordinary mail. We will be glad to have letters from anyone having a source in any uncommon seed.

THE 1954 SEED LIST

The new seed list is now being printed and because of the large number of entries, over 7,000, it will not be finished till the early part of January. Copies will be mailed to all magazine subscribers and to all making purchases during 1953, as well to those having requested a copy during the last 2 or three months, when our supply was exhausted due to an unexpected demand for it. If you do not receive your copy by January 15 it will be best to drop us a postal. Copies will not be freely mailed out due to the high costs.

STREPTOCARPUS EYLESSII

A suggestion on growing this pretty South Rhodesian native may be of value. It is claimed that it should have the morning sun and a cool place. In its natural situation, it is placed so that it never gets the afternoon sun.

This fact might be of interest to those who are growing other species as well as the African Violet. Why not test it out and let us know your findings?

A New York Arboretum

We like to see an interest taken in the growing of ornamental trees and shrubs and it is a pleasure to mention the arboretum being established at Newburgh, New York by Thomas C. Desmond.

He already has 795 species of trees, shrubs and woody vines established. It would be of interest to list a few of the most outstanding species.

Mr. Desmond states that he is especially interested in adding at this time, the following and if any of our readers have stock, please advise him:

Alnus maritima and *rubra*.

Bumelia lanuginosa.

Cupressus macnabiana.

Fraxinus anomala.

Gleditsia aquatica.

Juglans major and *rupestris*.

Juniperus pachyphloea.

Pinus albicaulis and *lambertiana*.

Salix bbbiana and *fluvialis*.

Sapindus drummondii.

Torreya taxifolia.

Ulmus serotina.

Aesculus arguta and *splendens*.

Ascyrum stans.

Betula glandulosa and *pumila*.

Ceanothus ovatus.

Chamaebataria millefolium.

Cornus foemina.

Cowania stansburiana.

Diapensia lapponica.

Dirca occidentalis.

Elliottia racemosa.

Empetrum nigrum.

Eurotia lanata.

Fallugia paradoxa.

Fendlera rupicola.

Hudsonia ericoides and *tomentosa*.

Iva oraria.

Jamesia americana.

Loiseleuria procumbens.

Lonicera oblongifolia.

Pachistima myrsinifolia.

Philadelphus floridus.

Rhamnus lanceolata.

Rhus aromatica illinoensis.

Salix candida, *cordata*, *pyrifolia*, *sericea*.

Vaccinium vitis-idaea minus.

Acer ginnala.

Ehretia thyrsiflora.

Pinus thunbergii var. *oculus-draconis*.

Prunus persica.

Abeliophyllum distichum.

STERILE FLOWERS.

Many plants of hybrid origin, such as *Eranthis* *Tubergenii*, and others, whose flowers are sterile, have a much longer lasting flower than if they formed seeds. Why is this?

SOME PLANTS WORTH GROWING.

Alyssum saxatile *Dudley Neville*.

Allysum serpyllifolium.

Arabis rosea.

Campanula raineri.

Campanula Waldsteiniana.

Campanula zoyrii.

Erysimum kotschyuanum.

Saponaria pulvinaris.

Dracoccephalum botryoides, a 6-8" plant; beautiful oak-leaf like foliage covered with a velvet down; dry sunny places; flowers a dull lavender-pink in clusters; hardy and long lived.

Ononis cenisia; a marvel for the sunny rockery; beautiful but not too hardy; quite prostrate; lovely sweet pea-like flowers in rose and pink.

Cornus officinalis.
Corylopsis glabrescens.
Daphane caucasica and *mezereum*.
Delta yunnanensis.
Ilex yunnanensis.
Lonicera bella and *caprifolium*.
Rhododendron mucronulatum.
Clematis pseudoalpina.
Lonicera flava.
Passiflora incarnata.
Actinidia kolomikta and *polygama*.
Celastrus angulata, *flagellaris*, *orbiculata major*.
Clematis alpina, *flammula*, *macropetala*.
Lonicera tragophylla.
Menispermum dauricum.
Muehlenbeckia complexa.

The list was divided up into sections and we have merely copied them from the original.

Talking about private arborets, there is a great deal of pleasure in establishing them. Usually, one should have suitable grounds for the purpose and no where would this be as ideal as would be found on farm property. One would be fortunate to own a large farm, where some brook, pond or lake was included and woodland; a rolling soil in some parts of it would be ideal.

Where such a farm is owned in a family the establishment of trees and shrubs can continue thru several generations and it is only in this way that beautiful trees can be had; it takes years for them to develop. But the most pleasure in this work is the actual propagation of rare trees and shrubs and in a great many cases this can only be accomplished from seeds. Thus, all arborets should have a nursery, where seeds are germinated and small stocks grown on.

Then, too, in this sort of work, you will find others interested in this same work and where one was able to establish a certain difficult tree or shrub another has accomplished the same with some other tree or shrub and thus exchanges are made.

We will always be very cooperative in helping those interested in this sort of gardening and suggest that you write us giving a description of your planting; what special plants have been established and what is being planned for the future. In this way others will become aware of your work and you will meet many who are likewise interested.

MANDEVILLE SUAVEOLENS FOR THE SMALL GREENHOUSE.

This is the only species that makes a satisfactory greenhouse plant. It is a beautiful deciduous climber bearing large pure white flowers during the summer months. It is ideal for trellises or training up rafters in a cool greenhouse.

It is best planted in a bed as it does not do well in pots for more than a season or two. The best soil mixture is 3 parts loam and 1 of peat or leaf mould, to which some sharp sand has been added.

Sow the seed in a sandy peat medium, in 65 degrees Far., where the air is moist.

It requires plenty of water when in good growth but, of course, very little water should be given during the winter months.

It is a beautiful climber for the greenhouse; the flowers being sweet scented and are produced in great profusion.

We would appreciate pictures of your garden and items on plants you are growing with your observations on their behavior.

HYBRIDIZING FERNS.

Ferns that increase from spores, reach their sexual period when the spore has grown to a small round leaf. It is at this period that hybridization takes place. The spores of the fronds do not cross.

If you want your ferns to be true, keep them separated at this stage or if new varieties are wanted, the spores can be sown together and thus will hybridize when they reach the small round-leaf stage (prothallus stage).

SPRING BULBS

ACIDANTHERA

(*Abyssinum* *Gladiolus*)

BICOLOR MURIELAE. Although not a true *Gladiolus*, this novelty resembles it very closely and should be handled in the same manner. The white flowers with purple blotch have a distinctive fragrance. Easily grown, produces bulblets like *Gladiolus* and is a good propagator. **Each 25¢;**
Dozen \$2.00; 100, \$10.00; 1,000, \$65.00.

TUBEROUS BEGONIAS

Select Strain of the very best colors.

DOUBLE CAMELLIA FLOWERED. Red, scarlet, pink, salmon, orange, copper, yellow, white, in separate colors or all colors mixed. **Each Doz. 1½-2 inches diameter .35 \$3.00 2 inches and up .40 3.50**

GLOXINIAS

BLANCHE DE MERU. Pinkish rose, white throat.

EMPEROR FREDERICK. Scarlet, white border.

EMPEROR WILLIAM. Deep blue, white edge.

ETOILE DE FEU. Carmine-red.

FIRE KING. Brilliant red.

MONT BLANC. Pure white.

TIGRINA. (Pointille). Spotted and stained hybrids.

VIOLACEA. Violet-blue.

Your choice of any Variety or a mixture of all colors. Top size, 2" diameter and up. **Each 45¢; Dozen \$4.50; 100, \$25.00 1st Size: Each, 35¢; Dozen \$3.20; 100, \$20.00**

CALADIUMS

Caladium Esculentum. (Elephant's Ears) 9"-11" cir. **Each 50¢; Dozen \$3.75; 100, \$30.00 7"-9" cir. Each 40¢; Dozen \$3.40; 100, \$20.00**

FANCY LEAVED CALADIUM. Rich ornamental leaves, marbled, veined and striped with white, pink and dark red. **2½ inch and up, diam. Each 50¢; Doz. \$4.50; \$35.00. 2-½ inch diam. Each 50¢; Doz. \$4.00; 100, \$30.00.**

CALLAS Richardia

ALBA MACULATA. Baby White Calla, with spotted leaves. **1½-2 inch diam. Each 35¢; Doz. \$3.00; 100, \$16.00**

ELLIOTTIANA. Large yellow. **2-½" diam. Each 40¢; Dozen \$4.25; 100, \$18.00**

REHMANNI SUPERBA. Pink Calla. **2" up. Ea. 60¢; Dozen \$5.00; -00, \$22.00**

TUBEROSES

SINGLE MEXICAN. 4-6" cir. **Each 25¢; Dozen \$1.40; 100, \$12.00.**

DOUBLE DWARF PEARL. 4-6" cir. **Each 25¢; Dozen \$1.60; 100, \$9.50.**

ZEPHYRANTHES

AJAX (Zephyr Lily) Canary yellow, blooms in August. **Each 25¢; Doz. \$2.00; 100, \$11.00.**

Prices are prepaid: state when wanted.

HARRY E. SAIER

Dimondale, Michigan.

CLASSIFIED ADVERTISEMENTS

We wish to make this classified section of special value to our readers who may have plants, roots or any other item that they wish to sell or exchange.

The charge will be 10¢ per line of 7 words, per insertion; four insertions at price of three. When offering plant material know your nursery laws.

SEEDS FOR SALE

BEAUTIFUL INDIAN ORCHIDS Himalayan Flower Bulbs, Anemone, Sternbergia, Iris, Tulips, Unusual charming seed s. G. Ghose & Co. Townend, Darjeeling, India. 19

JOES BULLETIN, issued bi-monthly, tells you where you can buy flowering and ornamental plants, shrubs or bulbs at half of standard catalog prices. Two years \$1.00. Sample free. 1854 24th Ave. N., Seattle, 2, Washington. (22)

DAYLILY SEEDS hand pollinated from choice hybrid reds, rose, pastels. Fresh seed (mixed only) 10 for 30¢; 40 for \$1.00. Ffoulkes, 610 Bryan, Jacksonville, 2, Fla.

AMARYLLIS BULBS

AMARYLLIS GIANT HYBRIDS, mixed colors bulbs also seedlings, offspring of Dutch and Mead strain. Prices on request. Philip Pate, Kissimmee, 14, Florida. 20

GLADIOLUS BULBS

SPRINGGLADS: Hardy Eurasian Species, fall planted, bloom in spring without thrips. List 16E free. Philip O. Buch, Rockaway, New Jersey.

PLANTS FOR SALE

MARANTAS and CALATHEA, beautiful under-leaf colors; Orchid-like flowers \$1.00 and \$2.00 each. PAUL A. GIROUARD, 2710 Lane St., Palatka, Florida.

CURCUMA PETIOLATA (orchid pink ginger or queen lily) Handsome plaited foliage, flowers in mid-summer, exotic cut flowers. In North, dig and store tubers. Large dormant clumps 3-5 yrs. \$1.50 prepaid. Free list. J. D. MARION, 214 Preston St., Shreveport, La. 11

EXOTIC DAY LILLIES, hand pollinated, choice crosses reds purples, rose, bicolors, pastels. Mixed "sprouted" seedlets (tiny plants) 10 for 60¢; 25, \$1.30; Seed 50, \$1.00; 1-year seedlings (mixed) \$1.25 Doz. Seed: Giant Hybrid GLOXINIA; AFRICAN VIOLETS 50¢ and \$1.00 pkts; "Easy-do" directions. 100 African Violets, write for list. Leaves 7 for \$1.00; young plants 12 for \$4.00. Ffoulkes', 610 Bryan St., Jacksonville, 2, Fla. 12

FIELD GROWN PERENNIALS. One or two year clumps; seedlings are 1 yr. we start digging in March and can ship up to May; no order for less than \$2.00, please. EACH.

ALSTROEMARIA AURANTICA 35

ADENOPHORA CONFUSA 35

AQUILEGIA HELENAE 35

ASTER ALPINA 25

BAPTISIA AUSTRALIS 25

ARMERIA PSEUDO-ARMEREA 35

CAMPANULA CARPATICA 35

CAMPANULA GLOMERATA 35

CENTAUREA DEALBATA 35

CENTAUREA RUTHENICA 35

DIANTHUS CEASIUS 30

DIANTHUS DELTOIDES ERECTA 25

DIANTHUS LOVELINESS 35

DIANTHUS ROSE CUSHION 35

DELPHINIUM Lamartine (small plts).... 25

DORONICUM CAUCASICUM 35

GAILLARDIA Goblin (small plts).... 5 for 30

GLAUCIUM (Sea Poppy) 15

HELIANTHEMUM MUTABILE 35

HYPERICUM POLYPHYLLUM 35

LYCHNIS CHALCEDONIA 25

LYCHNIS SALMONEA 25

MONARDA NITIDA 30

PENSTEMON PYGMAEUS 35

PENSTEMON TUBIFLORA 35

POTENTILLA AUREA 30

POTENTILLA NEPALENSIS 35

PYRETHRUM ROBINSON STRAIN 30

PRICES ARE NOT PREPAID. Write for list of small shrubs and trees. F. E. BLUNCK and SON, RFD 1, Finleyville, Pa.

AFRICAN VIOLETS: Roseonna leaves 4 for \$1.00; Gypsy leaves 7 for \$1.00. Unnamed African Violet seedlings, watch them bloom, 4 for \$1.00. Add 35¢ postage on all orders. Many old and new varieties, plants and leaves. Send stamp for list. Mrs. Sophia Baker, 2733 S. E. 35th, Portland, 2, Oregon. (Dept. S) 9

ACTINEA HERBACEA (Lakeside Daisy) 3-\$1.25; 10-\$4.00. Gentiana Andrewsii alba (White Closed Kentian) 3-\$2.00; 10-\$6.00. Postpaid. A M E R I C A N P E R E N N I A L G A R D E N S. Box 37, Garden City, Mich.

ARDISTIA, glossy curled crisped leaves. red Christmas berries; plants \$1.00 to \$5.00 each, postpaid. PAUL A. GIROUARD, 2710 Lane St., Palatka, Fla.

POINSETTIA ROOTED CUTTINGS, for Christmas blooming, variety of reds, pink and white, for potting or garden planting. Cultural directions. 25 for \$3.50, 50 for \$6.50, 100 for \$11.00. FOB Kissimmee. Small orders 3 for \$1.00, postpaid. PHILIP PATE, KISSIMMEE, 14, FLA. (22)

AFRICAN VIOLET LEAVES, 12 for \$1.00 named varieties, plants 3 to 6 in, tall 3 for \$1.00, my choice. Gypsy Series leaves 20¢ each 7 for \$1.00; plants 2 for \$1.00. Roseonna leaves 3 for \$1.00; Please add 25¢ postage. Mrs. Sophia M. Baker, 2733 S. E. 35th Place, Portland, 2, Ore.

CUTTINGS: \$1.50 per dozen; house plants mixed or Begonias or Sweet Scented Geraniums, Mints, herbs, wild ferns; prepaid. Mrs. H. C. Sanborn, RFD 1, Thetford Center, Vt.

COLEUS CUTTINGS, RARE AND FANCY varieties; 50 assorted cuttings \$1.00 plus 20¢ postage. Sultana cuttings same price. A. T. Linder, 521 Nathan Hale Rd., West Palm Beach, Florida. ap

HARDY NATIVE ORCHIDS (Zone IV)

Spring and Fall Delivery, Prepaid. Each Calopogon pulchellus, Grass Pink O. .75 Cypridium acaule, Pk. Ladyslipper .50 —aristatum, Ramshead Yel. Ladys'r 3.00 —pubescens, Common Yel. Ladys'r 1.00 —reginae, Showy Ladyslipper , 1.00 Goodyera pubescens, Downy Rattlesnake Plantain 1.00 —repens, Creeping Rattlesnake P. 1.50 Habenaria ciliaria, Yel. Fringed Or. 1.00 —fimbriata, Large Purple Fr. Orchid 1.25 —lacerata, Green Fringed Orchid 1.00 —psycodes, Small Pur. Fr. Orchid 1.25 Orchis spectabilis, Showy Orchid 1.25 Pogonia ophioglossoides, Rose Pog. 1.00 Spiranthes cernua, (Nodding Ladies Tresses) 1.25

SPECIAL: 4 of a kind for price of 3.

HARRY E. SAIER, DIMONDALE, MICH.

GARDEN SUPPLIES

RAFFIA. Natural, fancy XXX Grade, in tightly twisted hanks, average length 50-60 inches; weighing about 1 lb. Each: 75¢; 5 hanks for \$3.60, postpaid. HARRY E. SAIER, Dimondale, Mich.

COLORED RAFFIA. Fancy grade; fire proofed; cellophane wrapped; 1 lb. pkg; in 20 colors (state color) 1 pkg. \$1.25; 5 pkgs. \$5.00, postpaid. HARRY E. SAIER, Dimondale, Mich.

OSMUNDA FIBRE. The preferred potting medium of the largest Orchid growers throughout the world. Fresh cut and available all year. This fibre is carefully gathered, selected, hand-cleaned and sun-dried. No sticks, dirt, stems or inferior matter. Both dark and light or mixed. Bales about 65 lbs; price \$15.00, not prepaid. In less than bale lots, 40¢ per lb. prepaid; 45¢ on West Coast. HARRY E. SAIER. Dimondale, Mich.

GARDEN ORNAMENTS

CONCRETE GARDEN ORNAMENTS. Many new items. Frogs, Squirrels, Birds, Ducks, etc. Write for my illustrated booklet, price 10¢. WM. SPECK, 316 Herkimer, Utica, 4, N. Y.

Desmodium Species

Desmodium species as they grow here in South Florida, I am familiar with only three species and all three of them are rather bad weeds here which I have to keep hoeing out of my garden. The small trailing D. triflorum is sometimes used here as a lawn cover, but one has to be diligent in keeping it closely mown or it will seed and the numerous burrs will stick on to the cloths of any one crossing the lawn. Chapman's "Flora of the Southern United States," lists 18 species as native in Florida, but most of them are in the central and northern part of the state. There is a great difference in the acid and alkali soils of the state. The soil here in Pompano Beach and vicinity is acid with a PH of 6.7. We are 30 miles north of Miami and from Miami south to the Keys the PH is 7.8. For instance, the beautiful shrub Tetragzia bicolor grows luxuriously south of Miami, but I have never been able to grow it here at all.

W. A. Pool, Florida.

CLEMATOPSIS STANLEYI

Shock Headed Peter. It is found in the open veld, along roads, throughout Southern Rhodesia. It is a shrub growing 4-5 feet in height, erect, branched and covered with short downy hairs.

The flowers are 1-2 inches in diameter. Sepals are downy, white petal-like; there are no true petals.

This flower belongs to the same family as the Anemone and is closely related to the Clematis, Travellor's Joy.

The natives are said to rub the flowers in their hands and use as an inhalent for colds in the head.

It would be hardy only in the South where it will be an attractive shrub.

POSTAL SAVINGS.

The last report of the U. S. Postal Savings shows that \$2,617,500,000 are deposited, a decline of 5.4% from the year before. The average per deposit is \$783.85.

Of this \$33,000,000 is held by 866 banks. Of course, one would expect they would be Federal Reserve Banks but 8 are non-members, in other words non-par banks. 2% interest is paid by these banks.

During this one year, there were 2,174 accounts aggregating \$55,937, that were transferred to their dead account. This now totals \$329,463, deposits of which nothing has been heard of for 20 years! A lot of money to be forgotten.

However, the most important part of the report is the fact that \$2,558,000,000, or 95% of the total deposits, is in federal government I. O. U's, in other words, before these depositors can get their money back, the money will either have to be raised by selling more bonds, which at present will be impossible for the legal limit has already been reached, or taxes will have to be levied to raise the money!

This is not only a serious matter but you will find that all other federal funds, such as the Social Security monies, etc., are also in the same shape. No private institution would be allowed to handle money intrusted to them in the way the federal government handles it.

It is a question well worth thinking about, whether the Post Office, that cannot manage to run its own affairs without a continual loss, in spite of continual increases in its rates, should be in the banking business.

GARDEN SUPPLIES - INSECTICIDES - FERTILIZERS

SPHAGNUM FOR GERMINATING



It is simply impossible to germinate many seeds without the use of milled sphagnum moss. If you were over your seed pans all day long as the professional grower is you may find you could get along without it, but no professional grower would fail to have the fine moss on hand. It will save many a packet of valuable seed from loss due to an hours neglect, that cannot be avoided by one having other duties.

Now packed in $\frac{1}{2}$ bushel boxes containing approximately $\frac{1}{2}$ bushel; \$1.50 postpaid.

PEAT MOSS

Necessary in the germination of many seeds such as Ilex, Vacciniums and other acid loving plants

Postpaid	
1 Peck Packages.....	.70
$\frac{3}{2}$ " "	1.30

ROSE PLANT FOOD

100% plant food, organic formula of dried blood, fish scraps, bone meal, guano, potash, cotton seed meal, nitrate of soda, sulphate of ammonia, poultry manure powder and superphosphate, a 7-8-5 formula.

ONE LB. PKGS. 75¢

DU PONT 10% DDT INSECT POWDER

Controls cockroaches, flees, ants, bed bugs, moths, ticks, carpet beetle and silver fish.

1 Oz. Puffer Cans, Postpaid.....	.25¢
3 Oz. Puffer Cans.....	.50¢

ACTIVO

Quickly and cheaply makes rich, soil building humus from house and garden wastes.

Energizes bed, pot, garden and orchard soils.

COMPOSTING - Bring following types of materials into well drained heap, large barrel or hogshead, or ventilated garbage can: table scraps, fruit wastes, leaves, grass clippings, garden rubbish, sewage or sludge, citrus pulp, peat, etc:

Use as much garbage and other rich wastes as possible. Neutralize with ground limestone, and add a few shovels of ordinary soil for compacting the mass. Mix in 1-3 lbs. of ACTIV-O for each (approx) 250 lbs. compost. Moisten. Keep moist, but NOT wet. Use greater amounts of garden soil to compact leaves and other light, dry materials.

Better, mix in a handful or so (for each bushel of compost) of commercial fertilizer or plant food or ammonium sulphate, ammonium nitrate, etc.

No. 2. (approx. $2\frac{1}{2}$ lbs. gross)	\$1.35
No. 7: (Approx. 6 $\frac{1}{4}$ lbs. gross)	\$2.20

FERTO POTS

FERTO-POTS have taken the gardening world by storm. Users highly enthusiastic. Millions sold.

Pots made of rich rotted cow manure in automatic pot machines and kiln dried. No wilt, no set-back; quicker, better results if seed, bulbs, plants, cuttings are started in FERTO-POTS. When transplanted outdoors pot and all goes into the ground. Pots soften up in the moist soil and feed the plants. Excellent results as liners inside clay pots for African Violets and other house plants. FERTO-POTS are a boon to professional growers and home gardeners alike. Shipped prepaid at following prices: (Add 10% for Pacific Coast States).

PRICES: All prepaid by parcel post.

No. 2. Dozen	55¢; 100, \$3.00; 500, \$11.50
No. 2 $\frac{1}{2}$ Dozen	75¢; 100, \$3.50; 250, \$6.60.
No. 3 Dozen	85¢; 100, \$3.50; 250, \$8.50

HY-GRO PLANT FOOD

A SOLUBLE PLANT FOOD

A soluble plant food that can be used while you water your plants. It is immediately available as the solution penetrates into the soil and continues to feed over a long period. Will not harm roots or leaves. Can also be used in transplanting. Best applied to pots when they are dry and need watering.

Starter Solution for Transplanting for flower and vegetable seedlings, perennials, shrubs, etc. Checks wilting and gives transplants a healthy start for rapid growth.

FORMULA: 13 - 26 - 13

3 Oz. Bottle. Postpaid	.60¢
3 Bottles, postpaid	\$1.10

HAMMOND'S SLUG SHOT

Destroys many insects that prey upon house and garden plants.

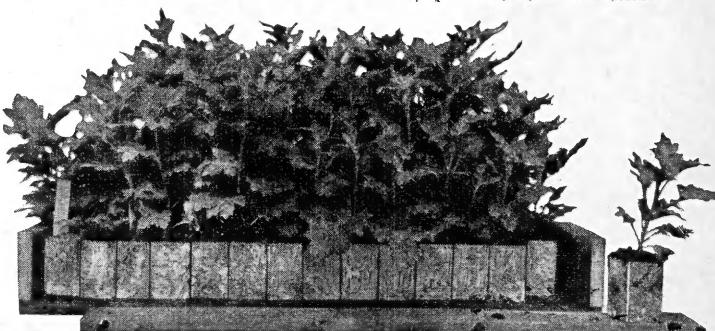
It is most effective when used as a powder and applied lightly over the infected parts. One application is generally sufficient.

1 lb. Cans. Postpaid.....	.75¢
3 Cans. Postpaid.....	\$1.50

VERMICULITE

Special for seed beds, for cuttings or for mixing in potting soil. It comes in three sized paper bags; the small size will take care of the germination needs of the small grower.

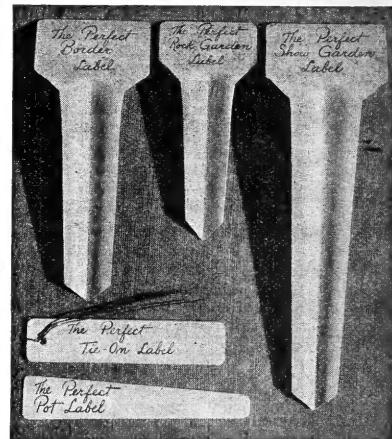
PRICES: 4 qt. bags, 55¢; $\frac{1}{2}$ bushel bags, \$1.00; 2 bushel bags, \$2.45, prepaid by mail.



PERFECT LABEL

MARK with ORDINARY LEAD PENCIL

Mark with your ordinary lead pencil; it is permanent and will not fade or become unreadable. If you wish to make any changes an ordinary eraser will remove the writing.



PRICES

5 inch; width of marking space 2 inches: 12 labels; \$1.25; 25 for \$2.40; 100 \$9.25

7 inch; width of marking space 2 $\frac{1}{8}$ inches: 12 labels: \$1.50; 25, \$2.90; 100, \$11.25.

POT STAKES

3 inch: 90¢ doz; 250 for \$4.00.

Painted stakes 3/8 inch wide; prepaid.

4 inch: 65¢ per 100; 1,000 for \$4.25.

5 inch: 70¢ per 100; 1,000 for \$4.50.

8 inch: \$1.00 per 100; 500 for \$4.75

10 inch: \$1.15 per 100; 250 for \$2.50

SPECIAL GARDEN STAKES:

7/8 inch wide, painted white:

8 inch: \$1.30 per 100; 250 for \$3.00.

1 1/8 inch wide; these make an attractive and cheap garden stake.

12 inch: Each 3¢; 25 for 55¢; 100 for \$2.00.

COPPER WIRED TREE, SHRUB TAGS:

3 $\frac{1}{2}$ " long, 5/8" wide, for tagging trees and shrubs; painted white.

70¢ per 100; 1,000 for \$5.50.

HARRY E. SAIER - DIMONDALE, MICHIGAN

ALL GARDEN AND MEDICINAL HERB SEEDS

(Continued from Page 273)

sown early in the spring in rich soil, the leaves are ready in late mid-summer; being hardy they will be ready for use in the spring following cutting before flower stems develop. Pkt. 15¢; Oz. 30¢; 1/4 lb. 80¢

CRESS, True Water

(*Nasturtium officinalis*) Low trailing perennial growing in wet ground and springs; easily grown from seed and is best for greens in early spring or fall.

Pkt. 20¢; Oz. 90¢

DILL

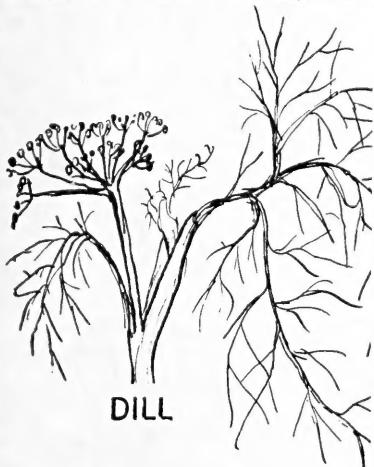
(*Anethum graveolens*) Parsley Family grown for its seeds, which are used in flavoring of dill pickles. Sow early in the spring or late in fall, in rows 18" apart, thinning to 8-10 in. in row. When ripe cut the heads, drying them on canvas and then thrashing out the seeds, which can be stored in cloth bags in a dry place.

Pkt. 10¢; Oz. 25¢; 1/4 lb. 40¢

FENNEL, Long Sweet

(*Foeniculum vulgare*) A hardy perennial grown as an annual for its aromatic seeds and fragrant young leaves, both used in flavoring; seeds are slow to germinate, so sow early in the spring, give full sun any ordinary care. Pkt. 15¢; Oz. 50¢

—**Florentine.** (*F. vulgare*, var. *dulce*) Has greatly enlarged leaf bases from a bulb-like base, 3-4 in. in diameter; the bulbs are blanched by covering with earth and then cooked as a vegetable but the stalks which resemble Anise-flavored Celery, can be eaten raw. Make plantings every two weeks, growth rapid. Pkt. 20¢; Oz. 60¢



DILL

SWEET FENNEL, Sicily

Large Sweet Broad Bottom. Similar to Florentine or Florence Fennel, and having a very broad base or 'apple' is extra tender. Pkt. 15¢; Oz. 30¢; 1/4 lb. 85¢.

HOARHOUND

(*Marrubium vulgare*) An aromatic perennial with woolly white foliage and whitish flowers; used mainly in flavoring candies; plant thrives in dry soil. Pkt. 20¢

HYSSOP (HIS-up)

(*Hyssopus officinalis*) Hardy perennial herb or sub-shrub grown as a culinary and medicinal herb and as an ornamental; grown from seed sown early in spring or late fall; transplant in early summer to 12-18 inches apart; limy soil best.

Pkt. 15¢ Oz. 50¢

LAVENDER, absinthium.

Shrubby plant and grown as a source for absinthe; hardy and easily grown. Pkt. 15¢; Oz. 50¢

LAVENDER, True.

(*Lavandula spica*) Not real hardy in N. and must be protected with a good mulch of straw; they develop their best



LAVENDER

fragrance if grown in a dry, light, limey friable soil in full sun, the soil not too rich. Grown for an ornament as well as for its leaves which are dried, giving off its rich fragrance for which it is valued. Start early in spring indoors or try planting it outdoors in Nov. Pkt. 25¢; 3 for 55¢

LEEK

(*Allium porrum*) A hardy biennial with a mild onion flavor, grown for its thick leaves and stems and used as asparagus or for seasoning soups and meats dishes. Sow early in spring in a seed bed, transplanting when 3" tall, 1-2 in. apart in flats; plant in light rich moist but well drained soil in rows with the plants 12-15" apart, setting them half their height in soil and gradually draw earth around stems as they grow. The plants can be dug for winter use, placing them in a cold frame or cool cellar, having a low temperature. Pkt. 15¢; Oz. 40¢; 1/4 lb. \$1.60.

LOVAGE

(*Levisticum officinale*) A perennial herb growing to 6 ft. with glossy dark green leaves and greenish-yellow flowers in umbels, hardy as far N as Pa. and Ill., best in deep rich soil, easy to grow. Cultivated for its aromatic fruits. Pkt. 15¢

RHUBARB

(*Rheum rhaboticum*) White Rhubarb is commonly increased by division of the root, growing it from seed is a much easier method, cheaper and above all plants from seed are much stronger and better growers. It comes very true to type as well. Sow seed early in the spring, growing them in a rich soil, transplanting them as they get size and finally set out in rows 4-5 ft. apart both ways. They stand a good amount of manure.

—**Goliath.** A red stem variety that is used very much. Pkt. 15¢; Oz. 25¢; 1/4 lb. 80¢

—Queen Victoria.

A popular English var Pkt. 15¢; Oz. 25¢; 1/4 lb. 80¢

ROCKET-SALAD

(*Eruca sativa*) Roquette. It is used as greens. Pkt. 15¢; Oz. 45¢

ROSEMARY

(*Rosmarinus officinalis*) A hardy shrubby plant grown chiefly for its aromatic leaves used in seasoning as well as an oil used in medicines. Grows 6 ft. and lasts for years with a little winter protection; prefers dry, well drained soils.

Pkt. 25¢; Oz. \$1.60.

RUE

(*Ruta graveolens*) A perennial shrubby plant to 3 ft. with yellowish flowers; has medicinal properties as well as ornamental.

Pkt. 25¢

SWEET BASIL

(*Ocimum basilicum*) Easily grown tender annual, 1 ft. Leaves delightfully clove-scented and used either green or dried in seasonings soups, salads, cottage cheese, chopped meats or sausages. Plant 6-10" apart, thrives in light, warm soils. Cut in undies to dry. Plants can be potted for winter growing. Pkt. 15¢; Oz. 45¢.

SAGE

(*Salvia officinalis*) Hardy perennial, easily grown; plant early in spring or in Nov. The leaves are dried and used as seasoning in meats, sausages, stuffings and cheeses. Space 2 1/2-3 ft.

Pkt. 15¢; Oz. 30¢.

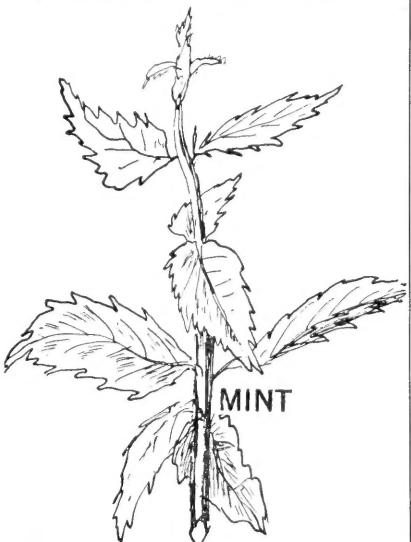
SAVORY, Winter

(*Satureja montana*) A perennial herb or sub-shrub that is grown and used much like the Summer Savory. Pkt. 15¢; Oz. 65¢

SAVORY, Summer

(*Satureja hortensis*) Hardy annual and very useful culinary herb, the aromatic leaves being used, either green or dried, soups and stews. Start seed in pans on account of their small size, transplanting as soon as large enough, spacing 15 inches apart; thrive in a good garden soil and full sun. It is very famous for its flavor in green string beans and should be grown in all bean sections. Pkt. 15¢; Oz. 45¢.

(Continued from Inside Front Cover)



MINT

HARRY E. SAIER - DIMONDALE, MICHIGAN

HERB SEEDS OF ALL KINDS



MARJORAM

(Continued from Inside Back Cover)

SCORZONERA (skaur-zoh-NEE-rah) (Cynara Cardunculus) A tall and strong nial herb grown as an annual for its long slender roots known as Black or Spanish Salsify. The young leaves can also be used in salads. Grow it the same as for Parsnips or Salsify.

Pkt. 15¢....Oz. 35¢....1/4 lb. \$1.25.

SCURVY GRASS

(Cochlearia officinalis) A small herb of Mustard Family grown for its medicinal properties also as a salad; prefers cool and partially shaded soil.

Pkt. 15¢

SORREL, Mammoth Lyon

(Rumex. Low growing perennial with sour leaves used in salads or to flavor salads. This is an improved variety much used in France and well worth growing where a market is available.

Pkt. 15¢; Oz. 45¢.



SUMMER SAVORY

SWEET MARJORAM

(Origanum marjorana) Perennial best grown as an annual in the N; leaves used green in summer and dried for winter, excellent for salads when green and for seasoning soups, meats, poultry and cheese

when dried. Seeds are small and best started in seed pan and transplanted out, 12-15" apart. For drying gather leaves just before they flower.

Pkt. 20¢....Oz. 35¢.

TANSY, French

(Tanacetum vulgare) Common Tansy. perennial to 3 ft., grown in the garden for ornament, in herb gardens for its medicinal properties and flavoring, easily grown.

Pkt. 15¢....Oz. 80¢.

THYME

(Thymus vulgaris) A hardy perennial growing to 8" tall with lavender flowers, grown both for ornament in border or rock garden and for its flavor, the fresh tops being used in garnishing and the leaves, either dried or fresh, chopped and used in a wide variety of cooked foods. Easily grown in ordinary garden soil, spacing 10-12 inches apart.

Pkt. 15¢....Oz. 45¢.

WORMWOOD

(Artemisia vulgaris) Mugwort or Mother Wort. Tall plant with stems often purple and leaves fragrant, green above and white beneath, flower heads yellow in spikes. Plants are aromatic, the tops and leaves being the parts dried; perennial.

Pkt. 20¢



WORMWOOD

MOUNTAIN SPINACH

(Atriplex hortensis) An annual which is sown in the open in March or April in drills. Thin the seedlings when they have made 3 or 4 leaves, after which they require no further attention except watering in dry weather. The leaves are eaten boiled like Spinach.

Oz. 35¢....ATRI-4. 15¢

CARDOON, Spanish

(Scorzonera hispanica) Herbaceous perennial, chiefly grown in the South; large broad ribbed leaves. It is not spiny but the ribs are not so solid as those of other sorts.

Oz. 40¢ CYNA-1. 15¢

WINTER PURSLANE

(Montia perfoliata) The leaves are eaten like those of Purslane, either raw or boiled. Annual, 4-12 inches.

MONT-4. 15¢

MERCURY

(Chenopodium Bonus-Henricus) A good hardy perennial. Sow seeds in the spring in a seed bed and transplant once before setting out in the garden. The leaves are eaten like Spinach or the shoots may be



PIMPERNEL

blanched by earthing them up and use like Asparagus a couple weeks before the latter comes in.

Oz. 40¢ CHEN-5. 15¢

PURSLANE, Golden

(Portulaca oleracea v. sativa) An extra large "pusley", the leaves of which at least double those of other kinds and grow closer together. It does not grow as rapidly but is more productive. Best for market gardeners, where "pusley" is sold on the market.

Oz. 50¢ PORT-4G. 15¢

BROCCOLI, Thousand Headed

In this variety the stem is usually divided into a number of branches bearing large leaves. Although not so tall, it is considered at least as productive, but less hardy than the Jersey Tree Kale.

Pkt. 15¢; Oz. 50¢

CABBAGE Schweinfurt Drumhead

Summer or autumn variety attaining a diameter of 20 inches or more, rather soft and often tinged brown. It is early and when sown in April, may be cut in September.

Pkt. 15¢; Oz. 50¢

MUSKEMELON, Green Climbing

A French variety that is ideal for growing on a trellis. Fruits oblong, 3-4 in. in diameter, deep green, slightly dotted with pale green, with faintly marbled ribs. The flesh is green, very melting, exceedingly juicy, sweet and flavored. An early kind.

Pkt. 15¢; Oz. 35¢

WELSH ONION

The Welsh Onion does not form a bulb like other Onions but only a small enlargement at the base of each shoot. This variety is coppery red, productive, comparatively hardy and is the most generally grown. It is especially good for bunching onions and should be tried by those growing onion sets for green Onions. Sow the seed from February to May, same culture as Onions.

Pkt. 15¢; Oz. 50¢

(Continued in Regular Seed Catalog)

HARRY E. SAIER - DIMONDALE, MICHIGAN